REFERENCE TEXTS

産業技術翻訳技能教育審議会
通信教育指導委員会

日本文「練習課題」に対する英訳の一例であります。産業技術翻訳技能教育審議会は、「標準答案」または「標準翻訳」など、「標準」という語を使用することを禁じておりますので、通信教育指導委員会は、同審議会の意向を汲んで、単にREFERENCE TEXT(S)としました。ここに掲げられている英文は、優れた翻訳の一例でありますから、受講者自身が行なった翻訳と照合して研究するために使用されることを望みます。

PMT/B-1 PUNCTUATION AND CAPITALIZATION

PMT/B 1-1 Punctuation for improving Distinction

It requires an elevator to have a high running speed in order to shorten the time of operation and to promote transportation efficiency. On the other hand, it requires a lower speed for approaching floors in order to minimize errors in reaching floors to the greatest possible extent. Therefore, in the case that a two-speed motor as described above is used, the speed for approaching floors inevitably becomes higher when transportation efficiency is attempted to be promoted, and it would be troublesome to promote preciseness in reaching floors. On the contrary, if an attempt is made to reach floors precisely, the maximum speed would be lowered, bringing about an extention of operation time. In designing the conventional types of AC elevators the difficulty has been in reconciling said inconsistent characteristics.

PMT/B 1-2 Punctuation for Clearer Identification of Antecedents

Since saturable reactors are used only after the action of speed reduction, the operational load is small (for example, below 25% in an elevator of AC two-step speed 60 m/mm), and generally the capacity for a two-step speed motor becomes smaller in proportion to the speed ratio, and in view of the foregoing, high reactor capacity and increased work per unit time are obtained.

PMT/B 1-3 Punctuation for clarifying Subject and Predicative

In the hitherto used shoe type brake, when the brake is opened a force in the horizontal direction is generated to act in such direction that one brake shoe presses on the wheel, therefore the brake shoes are not to be opened at the same time but to opened only in one-sided way, and it has been necessary, by providing a stopper for preventing them from falling down, to adjust gaps between the brake shoes and the brake wheel so as to be equalized.

According to the shoe type brake of this device, however, the push spring 12 for braking is interposed between a brake opening lever 7 connected with one brake arm 4a and a lever connecting the said brake opening lever with the other brake arm 4b, so that the force in the horizontal direction is not generated in the brake mechanism to press on the brake wheel when the brake is opened, and the brake shoes on the left and right sides are opened equally at the same time, thus producing excellent effect for its practical use in such points that a stopper for preventing them from falling down is not necessary to be provided, further it is not necessary to adjust always gaps between the brake shoes on the left and right sides and the brake wheel.

PMT/B 1-4 Punctuation used in Patent Claims (1)

An oil pressure type elevator, wherein an elevator is driven upward by sucking up oil from an oil tank by means of a pump and the elevator is driven downward by returning the oil to the oil tank by

way of the waste oil tube, consisting of a directional change-over valve which enables connecting the oil tube on the output side of the said pump to the waste oil tube, a heater provided in the oil tank, a means which detects the oil temperature reaching the pretetermined upper limit and a means which detects the oil temperature reaching the predetermined lower limit, and providing a means for adjusting oil temperature automatically, which means causing the said heater and pump to be driven when the oil temperature has reached the lower limit and further causing the said heater and pump to cease operating when the oil temperature has reached the upper limit.

PMT/B 1-5 Punctuation used in Patent Claims (2)
Method of preparing a relatively stable insulating coating material containing aluminum nitrate, comprising heat treating commercial hydrolyzed aluminum nitrate to increase its aluminum oxide equivalent, mixing a relatively small portion of said coating material containing said heat treated aluminum nitrate, plating said coating material on a metal base as a test to determine the amount of said aluminum oxide equivalent, and repeating said heat treatment and said test until said test produces a relatively smooth coating, said relatively smooth coating indicating an aluminum oxide equivalent of from 20 to 33% by weight of the treated aluminum nitrate.

REFERENCE TEXTS

産業技術翻訳技能教育審議会
通信教育指導委員会

日本文「練習課題」に対する英訳の一例であります。産業技術翻訳技能教育審議会は、「標準答案」または「標準翻訳」など、「標準」という語を使用することを禁じておりますので、通信教育指導委員会は、同審議会の意向を汲んで、単に REFERENCE TEXT(S) としました。ここに掲げられている英文は、優れた翻訳の一例でありますから、受講者自身が行なった翻訳と照合して研究するために使用されることを望みます。

PMT/B 2 AVOIDING TECHNICAL LANGUAGE

PMT/B 2-1 USP 3,385,136 STRAIN GAUGE TORQUEMETTER FOR MEASURING THE TORQUE IN EPICYCLIC TRANSMISSION

The conventional planetary gear transmission comprises three members; an input member, an output member, and a reaction member. In accordance with the illustrated form of this invention, the input and output members are sun gears, while the reaction member is the carrier for the planet gears. The carrier is supported in annular bearings but is rotatably fixed by means of the torque-sensing element which comprises a steel link to which a strain gauge member is affixed. Thus, in accordance with this invention the torque developed in the output sun gear is determined by the strain developed in the link serving to fix the reaction member of the transmission. The reaction member may be any ohe of the three elements of the transmission, so long as the other two members are rotatable.
It is an object of this invention to provide simplified and accurate torque measuring means requiring minimum modification to conventional planetary gear transmissions and in which torque is measured by an axial strain developed in a link serving to fix the reaction member of the transmission. It is to be understood that the axial strain in the link is tangenial to the torque.
Another object of this invention is to lock the reaction member of a planetary gear trnsmission with a tangential rigid link for developing a measurable axial strain in said link, said strain being a function of torque.

PMT/B 2-2 USP 3,387,499 MECHANICAL VIBRATOR WITH ELECTRO-MAGNETIC DAMPING MEANS

Accoding to the present invention, the above objects are achieved through the use of an electric eddy current damper as the damping device, the damping eddy currents being produced, for example, in a copper plate which is secured to the vibratory mass, which copper plate moves in a stationary magnetic field or in a magnetic field which moves with a counter-vibrating mass. The stronger the magnetic field, the larger will be the eddy currents acting to damp the mechanically produced vibrations and the grater will be the reduction in the amplitude of these vibrations. The magnetic field can be generated, for example, by means of an electromagnet having a controllabl D.C. excitation, the amplitude of which can be regulated by a suitable control circuit.
Additional objects and advantages of the present invention will become apparent upon consideration of the following description when taken in conjunction with the accompanying drawings in which:
FIGURE 1 is a pictorial side view of a preferred embodiment of the present present invention; and
FIGURE 2 is a similar view of a second embodiment of this invention.

PMT/B 2-3 USP 3,387,898 WEIGHING SCALE BEARING STRUCTURE

In many weighin mechanisms, levers are supported and the forces are transmitted to and from the levers by means of knife-edge pivot and bearing assemblies in which the knife-edge pivot rests in a suitably mounted bearing provided with a V-groove. The V-groove normally positions the pivot in a longitudinal plane and anti-friction plates applied to the end of the bearing block normally restrain the pivot from endwise motion. As is well known, such pivot and bearing assemblies are not wholly satisfactory since their use leads to inaccuracies in weighing. Thus, since the V-groove must be made with a bottom having a slight radius to prevent frictional contact of the sides of the V-groove with the sides of the knife-edge pivot, the knife-edge pivot "skate" over the surface of the flattened bottom of the V-groove causing the lever to assume readily a different balance or zero position for every different position of the knife-edge pivot on the radius portion of the V-groove. The movement of the pivot relative to the radius portion of the V-groove alters in effect to the pivot distances, resulting in inaccuracies in the weighing.

It is an important object of this invention to provide a bearing for a weighing scale knife-edge pivot which will be free from the above-mentioned and other disadvantages of the prior art devices and which will be especially simple in construction, inexpensive to produce, and efficient in use.

PMT/B 2-4 USP 3,381,141 AMPLITUDE DETECTOR EMPLOYING SPECIALLY BIASED TRANSISTORIZED SCHMITT TRIGGER IN COMBINATION WITH TRANSISTORIZED INPUT AMPLIFIER FOR TEMPERATURE COMPENSATION

This invention is illustrated in the drawings wherein:

FIG. 1 is a schematic diagram of an alternating current signal detection circuit;

FIG. 2 is a curve showing the change in audio output of the audio amplifier as a function of temperature; and

FIG. 3 is a curve showing the sensitivity of a Schmitt trigger circuit as a function of temperature.

In practicing this invention an alternating current signal level detection circuit is provided consisting of an alternating current amplifier, a detector and a Schmitt trigger circuit. When the detected output of the amplifier reaches a predetermined level, the Schmitt trigger is energized producing an output pulse. The alternating current amplifier is a transistor amplifier having no feedback of temperature compensating components and thus its gain changes with changes in the ambient temperature. The output signal from the amplifier is detected and filtered by a diode detector to provide a direct current signal which is applied to the input transistor of a Schmitt trigger circuit. The input transistor of the Schmitt trigger circuit is normally biased to conduction. When the direct current signal applied to the Schmitt trigger circuit reaches a predetermined value, the normally conducting input transistor is biased to nonconduction causing a rapid switching action to take place, thereby producting an output signal.

PMT/B 2-5 USP 3,384,616 THERMALLY STABLE POLYAMIDES CONTAINING COPPER 2,2'-DIHYDROXY-DIPHENYLSULFIDES OR MIXTURES OF COPPER SALTS WITH 2,2'-DIHYDROXY-DIPHENYLSULFIDES

It has now been found that these disadvantages can be avoided and polyamides of outstanding thermal stability can be obtained by adding to the polyamides compounds of copper with 2,2'-dihydroxydiphenylsulfides or mixtures of copper salts with 2,2'-dihydroxydiphenyl sulfides.

The compounds of copper with 2,2'-dihydroxydiphenylsulfides which may be used in the present invention are either salts made from equimolar quantities of copper and a thio-bis-phenol, or complex salts made from copper and a thio-bis-phenol in a 1:2 molar ratio. These salts or complex salts can be obtained advantageously, for example by dissolving the thio-bis-phenol in appropriate quantities in inert organic water-miscible solvents such as alcohols, ketones, or the like, and adding to these solutions, solutions or suspensions of copper salts of inorganic or organic acids such as copper chloride, copper sulfate, copper nitrate, copper acetate, copper propionate, etc., in the said solvents, or adding to the said solutions aqueous solutions of these salts, and adding water, if desired, to the mixture thus obtained. By the appropriate selection of the molar ratio between the thio-bis-phenol and copper compound salt mixtures can also be made in which the molar ratio of thio-bis-phenol to the copper compound amounts to between approximately 2:1 and approximately 1:1. Such salt mixtures are also outstandingly suited for the thermal stabilization of the polyamides.

REFERENCE TEXTS

産業技術翻訳技能教育審議会
通信教育指導委員会

日本文「練習問題」に対する英訳の一例であります．産業技術翻訳技能教育審議会は，「標準答案」または「模範翻訳」など，「標準」という語を使用することを禁じておりますので，通信教育指導委員会は，同審議会の意向を汲んで，単にREFERENCE TEXT(S)としました．ここに掲げられている英文は，優れた翻訳の一例でありますから，受講者自身が行なった翻訳と照合して研究するために使用されることを望みます．

PMT/B-3 SELECTION AND IMPROVED USAGE OF CORRECT WORDS

PMT/B-3-1
What is claimed is:
"In the process for the preparation of compounds having the formula:
wherein
X is a member selected from the group consisting of (H, H), (H, OH) and (=O);
R is a member selected from the group consisting of hydrogen and lower alkanoyl; and
R is lower alkyl
in which R is introduced by treatment of a 20-keto-16-pregnene with R-magnesium bromide, the 17 -hydroxy group is introduced by formation of a 20-enol acetate, subsequent 17 , 20-epodixation and hydrolysis of the resultant 17 ,20-epoxide, a lower alkanoyloxy group at C-21 is introduced by bromination at C-21 and treatment of the 21-bromo compound with an alkali metal lower alkanoate; and the 3-keto group is introduced by oxidizing a 3-hydroxyl group; the steps which comprise:
(a) treating prior to said introduction of R, a compound of the formula:
wherein X is as above defined, with a substantially equimolar quantity of chlorine in a non-aqueous inert organic solvent so as to selectively introduce chlorine atoms at C-5 and C-6, and
(b) removing said chlorine atoms at C-5 and C-6 by treatment with zinc and acetic acid subsequent to said introduction of said R, said introduction of said 17 -hydroxyl group, said introduction of said 21-lower alkanoyloxy group, and said oxidation of said 3-hydroxy group to said 3-keto group."

PMT/B-3-2 (USP 340,571)
What is claimed is:
In a camera having a shutter mechanism including two independently operable shutter-actuation elements, a shutter timing apparatus for effecting a precisely determined camera exposure comprising a pair of electro-responsive devices adapted to be individually coupled to said elements; and electrical supply circuit; a pair of control circuits coupled to said circuit each including one of said devices; means for developing an electrical pulse in one of said control circuits to cause its associated device to initiate an exposure; a normally non-conductive electron discharge device included in the other of said control circuits:
(See next page)

PMT/B-3-2 (Continued)
and an electrical time-constant circuit responsive to operation of said pulse-developing means for rendering said discharge device conductive to develop a delayed pulse in said other of said control circuits to cause its associated electro-responsive device to complete an exposure.

PMT/B-3-3 Abstract of the Disclosure (USP 2,380,276)
Turbine blades 12 are set into recesses in a bucket wheel 11 with the bases of the blades touching one another to form a crack 17. There has been a tendency to cause failure by stress concentration where this crack joins the weld metal which holds the turbine blades in place. The invention provides holes 18 to relieve the stress concentration.
What is claimed is:
In an elastic fluid turbine, a blade carrying support, a plurality of blade bases having adjacent surfaces abutting one another, and a cast metal joint between the surface of said blade carrying member and the ends of said blade bases, said cast metal joint and said blade bases having rounded surfaces forming holes extending transversely thereof and constituting the terminal portion of the cracks formed by said abutting surfaces of said blade bases at said joint.

PMT/B-3-4 (USP 3,002,342)
What is claimed is:
Mechanism for controlling r latively high velocity flow of fluids through and from ambulant conduit means to apply reverse and side, thrust selectively to the conduit means comprising in combination, a conduit section to define a through path of relative high velocity fluid flow, means providing lateral outlet openings at least on opposite sides of said section, adjustable flow retarding means movable into the flow path through said section to initiate diverted flow to said lateral openings, flow directing vanes mounted in said lateral openings, a plurality of separate outside door means each independently associated with one of said vane-equipped lateral openings to cover and uncover it in varying degrees and selectively control flow therefrom, and means independently to operate said outside door means selectively to control flow from the van-equipped lateral openings selectively to ap ly reverse and side thrust to s id conduit sections.

PMT/B-3-5 (USP 1,971,193)
(1) is a polyphase magnetron having an anode comprising (2) equal segments of a cylinder, each anode segment being connected to one phase of a polyphase circuit, each phase of which is tuned to the frequency of oscillation of the magnetron thereby to produce polyphase oscillations. (See next page)

PMT/B-3-5 (Continued)
The combination, in a polyphase oscillation generator of an electron discharge device having a number of anodes greater than two arranged about a cathode, a polyphase circuit connected to said anodes, means whereby said polyphase circuit is tuned to the frequency of oscillations to be produced, and means to cause oscillations to be produced in said polyphase circuit having a frequency dependent upon the tuning of said polyphase circuit said means including means to produce a magnetic field between said anodes and cathode.

(RVD-4903-200)

REFERENCE TEXTS

産業技術翻訳技能教育審議会
通信教育指導委員会

日本文「練習課題」に対する英訳の一例であります。産業技術翻訳技能教育審議会は，「標準答案」または「標準翻訳」など，「標準」という語を使用することを禁じておりますので，通信教育指導委員会は，同審議会の意向を汲んで，単に REFERENCE TEXT(S) としました。ここに掲げられている英文は，優れた翻訳の一例でありますから，受講者自身が行なった翻訳と照合して研究するために使用されることを望みます。

PMT/B-4 CHOOSING THE RIGHT WORDS

PMT/B-4-1 Claims (USP 3,381,579)

What is claimed is:

1. A back spot-facing and countersinking tool, comprising a tubular casing, a drive sleeve journalled for rotation in the casing and adapted to be driven by a motor, a drive shaft telescopically received in said sleeve, a drive connection between said sleeve and shaft preventing relative rotation thereof while permitting relative axial movement, a pilot mounted on the end of said shaft projecting beyond an end of the casing and adapted to carry a cutter at its outer end, an axially adjustable work-engaging footpiece at the working end of said casing, and means for moving said shaft axially.

2. The tool set forth in claim 1 in which piston means is provided in the casing for moving said shaft axially and in which an adjustable stop means is provided for limiting the stroke of said piston means.

3. A back spot-facing and countersinking tool, comprising a tubular casing, a drive sleeve journalled for rotation in the casing and adapted to be driven by a motor, a drive shaft telescopically received in said sleeve, a drive connection between said sleeve and shaft preventing relative rotation thereof while permitting relative axial movement, a pilot mounted on the end of said shaft projecting beyond an end of the casing and adapted to carry a cutter at its outer end, said casing being formed to provide an annular chamber concentric with said sleeve, an annular piston in said chamber, said casing having fluid inlet and outlet passage means from the exterior thereof to said chamber, said piston having an extension projecting forward beyond the end of said sleeve and journalling said shaft.

4. The tool set forth in claim 3 in which said casing carries an adjustable stop means for limiting the stroke of the piston.

PMT/B-4-2 Claims (USP 3,386,304)

That which is claimed is:

1. In an adjustable motor base for use in conjunction with a motor provided with a variable speed sheave, said base comprising a plurality of motor supports and mounting means therefor, said supports being movable relative to said mounting means and including means for driving at least one of the supports relative to said base, said mounting means being disposed at an angle with respect to said supports whereby movement of said supports will shift a motor carried on the supports sidewise with respect to said base, said motor and the supports carrying the motor being movable in response to the action of said driving means, the improvement wherein each of said supports define means for connecting a motor thereto, said motor connecting means on said one support being located on both sides of said base, and wherein said

(See next page)

PMT/B-4-2 (Continued)
supports include at least two additional supports, each of which is movable relative to said mounting means, one of said additional supports having motor connecting means located at least on one side of said base, and the other of said supports having motor connecting means located at least on the opposite side of said base whereby said base can be used in either of two inverted position, and wherein said driving means is operable from either end of said base.
2. A motor base in accordance with claim 1 wherein said driving means comprises a drive screw, a removable hand wheel for rotating said screw, and means for connecting said hand wheel at opposite ends of said screw to provide for operation from either end.

PMT/B-4-3 Claims (USP 3,384,805)
I claim:
1. Apparatus for providing an accurate indication of the RMS value of an AC signal, said apparatus comprising:
a harmonic filter for removing harmonics from an AC signal, said filter means having an input and an output;
summing means having a first input connected to the output of said filter means and having a second input and an output;
an amplifier;
a stabilizing network;
rectifier network means having an input for receiving an AC signal and having an output at which appear a DC signal indicative of the average amplitude of the AC signal at its output; and
means including said amplifier means and said stabilizing network means, connecting the output of said summing means to the input of said rectifier network means and also to said second input of said summing means.
2. Apparatus according to claim 1, wherein said harmonic filter is adapted to remove the third harmonic of a specific frequency AC input signal, said filter further having sharp cutoff characteristics.
3. Apparatus according to claim 1, wherein said amplifier has a gain of more than 10,000.
4. Apparatus according to claim 1, wherein said rectifier network means is of the diode bridge type.
5. Apparatus according to claim 4, wherein said amplifier has a gain of more than 10,000.

PMT/B-4-4
Hardness is usually expressed in terms of the dissolved calcium and magnesium salts calculated as calcium carbonate equivalent ($CaCO_3$). Water hardness may be divided into two classes: carbonate and noncarbonate, also frequently known as temporary and permanent. Temporary hardness can usually be greatly reduced by boiling; permanent hardness requires the use of chemical agents. Carbonate, or temporary hardness, is caused by bicarbonates of lime and magnesia: noncarbonate, or permanent hardness, is due to the sulfates and chlorides of lime and magnesia. In addition to

(See next page)

PMT/B-4-4 (Continued)
hardness, varying amounts of sodium salts, silica, alumina, iron, or manganese may also be present. The total dissolved solids may range from a few parts per million in snow water to several thousand parts per million in water from mineral springs.

PMT/B-4-5 Claims (USP 3,383,582)
What is claimed is:
1. In combination, a source of fluctuating direct-current voltage capable of fluctuating from 0 to a maximum value, first and second magnetic cores, said first core having a lower coercive force than said second core, a primary winding wound on both said first and said second cores, a first control winding wound on said first core, a second control winding wound on said second core, a semiconductor switch having a control electrode and a transconductive path, said path being connected to supply current from said source to said primary winding whenever a turn-ON signal is applied to said control electrode means including said first control winding for supplying a turn-ON signal to said control electrode when said first core is unsaturated and means including said second control winding for supplying a turn-OFF signal to said control electrode when said first core saturates.
2. The combination set forth in claim 1 wherein said means for supplying turn-ON signals to said control electrode includes a source of trigger pulses for initiating the application of turn-ON signals to said control electrode, said source of trigger pulses supplying pulses having a relatively small magnitude in comparison to the voltage developed across said first control winding when said first core is energized below its saturation level.
3. The combination set forth in claim 2 wherein said source of trigger pulses comprises a source of pulses having a constant repetition rate.

REFERENCE TEXTS

産業技術翻訳技能教育審議会
通信教育指導委員会

日本文「練習課題」に対する英訳の一例であります。産業技術翻訳技能教育審議会は、「標準答案」または「標準翻訳」など、「標準」という語を使用することを禁じておりますので、通信教育指導委員会は、同審議会の意向を汲んで、単に REFERENCE TEXT(S) としました。ここに掲げられている英文は、優れた翻訳の一例でありますから、受講者自身が行なった翻訳と照合して研究するために使用されることを望みます。

PMT/B 5-1 Rate Actuator for Hydraulic Rate Controlled Systems (USP 3,386,293)

From the foregoing, it will be understood that among the objects of this invention are:

To provide an improved rate actuator for use in hydraulic systems,

To eliminate the electrical pick-off and force motor heretofore employed in such systems,

To eliminate the costly error signals heretofore generated in the electrical transducers in the gyro and servo valve, such as noise pulses and null shift,

To provide a sensed rate which is a direct input to the first stage of the servo valve,

To provide a torque generator in the system, which generator is also available for summing other data to provide independent electrical input to the rate actuator,

To provide direct coupling of a sensed rate indicator to drive the first stage of a servo valve, also having provision for external control by independent electrical signal, such as a rotary force motor or torquer.

The features of novelty which I believe to be characteristic of my invention are set forth with particularity in the appended claims. My invention itself, however, both as to its fundamental principles and as to its particular embodiments, will best be understood by reference to the specification and accompanying drawing, in which

FIG. 1 is a cross-sectional elevation of a rate actuator according to this invention, taken on lines 1-1 of FIG. 2 in a plane perpendicular to the precession axis of the gyro embodied therein, and

FIG. 2 is a similar view taken on lines 2-2 of FIG. 1, in the plane of the precession axis.

Referring now more particularly to FIG. 1, 10 designates a hollow casing having within it a generally cylindrical chamber in which the rotary piston 15 is arranged for partial rotation, of the order of 10^{0}, either clockwise or counterclockwise about the null position shown in FIG. 1.

PMT/B 5-2 Variable Speed Sheave (USP 3,386,300)

This invention relates to a variable speed sheave construction. The invention is particularly concerned with a sheave construction which is characterized by an improved design whereby the construction is characterized by an especially long life and by substantially maintenance-free operation.

A wide variety of designs are available in the case of variable speed sheaves. Such sheaves characteristically comprise a pair of flange members with one or both of the flange members being movable on associated support means. By varying the spacing between the flange members, a pulley associated therewith will assume various positions with respect to the axis of the sheave. Accordingly, the drive shaft associated with the sheave has various performance characteristics depending upon the relative positions of the flange members.

Because of the movements of the flange members, lubrication of variable speed sheaves becomes a problem. Furthermore, the existence of movable parts increases design problems from the standpoint of the ability to secure a high degree of structual strength.
It is a general object of this invention to provide a variable speed sheave construction which is characterized by highly desirable operating features.
It is a more particular object of this invention to provide a variable speed sheave construction which includes lubricating means and associated operating elements whereby the construction provides a long operating life and requires a minimum amount of maintenance.
It is a further particular object of this invention to provide a variable speed sheave construction which includes elements arranged whereby a high degree of structural strength can be achieved in the construction without sacrificing operating efficiency and without significantly increasing manufacturing costs.

PMT/B 5-3 Television Width Linearity Control (USP 3,153,174)
In a television receiver, an electromagnetic beam deflection system for the cathode ray tube comprising, a deflection coil associated with said tube for producing a beam deflecting electromagnetic field therein, a source of sawtooth waveform current, an asymmetrically non-linear inductor coil connected serially with said deflection coil and said source, said inductor coil comprising a helical coil, a permanent magnet fixedly disposed adjacent said inductor coil to establish a static magnetic flux component therein of a sufficient magnitude to cause asymmetrical saturation of said inductor coil in response to sawtooth deflection current flowing therethrough, a first core member comprising a magnetic conducting material and being disposed at one end of said inductor coil adjacent said permanent magnet, said first core member being operative to be moved axially with respect to said inductor coil for controlling the amount of magnetic flux linking said inductor coil from said permanent magnet for varying the asymmetrical properties of said inductor coil, and a second core member comprising a high permeability material and being disposed at the other end of said inductor coil and being operative to move axially with respect to said inductor coil for varying the nominal impedance of said inductor coil.

PMT/B 5-4 Combined AC and DC Power Supply with Transformer Tap Changing Regulation (USP 3,384,803)
Abstract of the Disclosure.
A voltage inverter for supplying a regulated AC and DC voltage from a low voltage DC power supply. A two-transistor, push-pull oscillator circuit is connected to the end of the primary winding of a power transformer. Two intermediate taps on the primary winding are connected to a full wave bridge rectifier. The outputs of the bridge rectifier are connected to the collector and base of a normally non-conducting control transistor. The emitter of the control transistor is operatively

PMT/B 5-4 (Continued)
connected to the oscillator, thus forming a normally open circuit between each of the intermediate taps and the oscillator circuit. A transistor switching circuit is operatively connected to the base of the control transistor for rendering the control transistor conductive when the bridge rectifier output voltage is above or below predetermined values, thus shifting the apparent primary center tap during each half cycle of the oscillator.

PMT/B 5-5 Method of Ion Exchanging Crystalline Aluminosilicates (USP 3,383,168)

Abstract of the Disclosure.

Crystalline aluminosilicate materials are ion exchanged using liquid ammonia as the ion exchange medium. Less desirable cations, e.g. alkali metal cations are replaced by ion exchange with a solution of more desirable cations, e.g. cerium, in the liquid ammonia medium.

This invention relates to a method for conducting an ion-exchange operation and in particular concerns the preparation of catalytic materials. Ion exchange processes, insofar as heretofore known, have used water as the medium for bringing a desired ion into contact with a solid having ion exchange capabilities which contains a less-desirable, exchangeable ion. The process of this invention avoids the use of water in ion exchange and by avoiding such use provides a number of advantages, particularly when the materials ion-exchanged are to be used in catalytic processes. Where these processes involve organic reagents and/or products it often is desired to have the ion-exchange material in a state where it contains minimum free water. In the method of this invention, free water can be removed from the ion exchange material during the ion exchange process. Also, where crystalline alumino-silicates are to be used in high-temperature hydrocarbon conversion processes such as cracking this invention avoids the need for additional calcination after ion exchange treatment.

REFERENCE TEXTS

産業技術翻訳技能教育審議会
通信教育指導委員会

日本文「練習課題」に対する英訳の一例であります。産業技術翻訳技能教育審議会は、「模範答案」または「模範翻訳」など、「模範」という語を使用することを禁じておりますので、通信教育指導委員会は、同審議会の意向を汲んで、単にREFERENCE TEXT(S)としました。ここに掲げられている英文は、優れた翻訳の一例でありますから、受講者自身が行なった翻訳と照合して研究するために使用されることを望みます。

PMT/B 6 LEARNING THE MEANING OF TECHNICAL JARGON

PMT/B 6-1 (USP 3,152,851)

1. In a wiring device having an insulative housing with at least one elongated wire insertion channel, the combination comprising a resilient member having an elongated resilient wire engagement arm, a free outer end of said arm extending at least partly across said wire insertion channel so that insertion of a wire along said channel produces angular resilient deflection of said arm which in turn braces said wire against adjacent abutment means and a wire release insulative member supported in movable relation to said housing, said insulative member having at least one pivot portion pivotally supported adjacent a bottom surface of another elongated channel in said housing, said other channel extending in generally parallel relation with said arm and having generally parallel side surfaces, a drive portion of said insulative member extending inwardly along said other channel from one side of said insulative member pivot portion, an actuating portion of said insulative member extending outwardly along said other channel from the opposite side of said insulative member pivot portion, said insulative member having a longitudinal section of general parallelogram contour through said drive and actuating portions, one parallelogram side of said drive portion being engageable with and extending generally parallel with an inwardly located portion of said wire engagement arm so as to provide for urging said arm resiliently and angularly outwardly from engagement with said wire, another parallelogram side of one of said insulative member drive and actuating portions being engageable with one of opposite side surfaces of said other channel to limit the extend to which said insulative member can be deflected away from said wire engagement arm and thus the extent to which said arm can be deflected by pulling forces on said wire, said other channel opening to the exterior of said housing so that access is provided to said insulative member actuating portion for the application of wire release forces thereto.

PMT/B 6-2 (USP 3,152,844)

1. In a fluid pressure system having a pair of fluid pressure sources and a pair of fluid pressure responsive motors, control means for controlling the application of fluid pressure from said sources to said motors including a housing, means within said housing providing a pair of pressure fluid flow passages for respective connection between said sources and motors, a pair of application means for controlling said flow passages, one of said application means being movable in response to an applied force thereon to an applying position to effect the application of fluid pressure through one of said flow passages, the other of said application means defining with said housing an expansible chamber, a resilient connection between said application means, said resilient connection being movable with said one application means upon movement thereof to the applying position to concertly move said other application means to an advanced position and apply a pre-loading force thereon, and other means within said housing providing passage for the applied fluid pressure from said one flow passage to said chamber,

(see next page)

(cont'd.)
said other application means being movable from the advanced position in response to fluid pressure in said chamber and the pre-load force to an applying position to effect the application of fluid pressure through the other of said flow passages.

PMT/B 6-3 MULTIPLE BATTERY CHARGERS (U.S.P. 3.153.186)
In apparatus for charging a pair of batteries successively, the combination of
a transformer-rectifier charging circuit;
a saturable reactor including
a pair of gate windings connected in said charging circuit to control current flow therethrough, and
a pair of control windings;
switching means for selectively connecting said charging circuit to one or the other of the batteries being charged;
a control circuit including
at least one transistor,
a voltage divider connected to sense the terminal voltage of the battery being charged,
a Zener diode connected between said voltage divider and said transistor such that said transistor is rendered conductive when said terminal voltage exceeds a predetermined value, and
a positive feedback circuit connected to said transistor and operative via said voltage divider to maintain said transistor in either the fully conductive or fully nonconductive state;
circuit means interconnected between said transistor and one of said control windings to selectively shunt said one control winding in accordance with a particular conductive state of said transistor so that the high charging current flows initially and substantially, decreased charging current flows once said terminal voltage has exceeded said predetermined value; and
timer circuit means operative via said switching means to connect said charging circuit to one of the batteries for a predetermined period of time not affected by the operation of said control circuit and then connect said charging circuit to the other battery for a like period of time.

PMT/B 6-4 (USP 3,153,175)
An automatically-starting plasma torch system, which comprises an electrical plasma torch system having a front electrode and a back electrode adapted to have a high-current main arc maintained therebetween, power-supply means to impress a voltage between said front and back electrodes, said power-supply means being adapted in response to ionization of the space between said front and back electrodes to initiate a high-current main arc therebetween, means to effect a continuous flow of gas between said front and back electrodes and in such relation to said main arc that said gas is heated

(see next page)

(cont'd.)
thereby, at least one starting electrode additional to said front and back electrodes and disposed in the vicinity thereof, said starting electrode being so related to said front and back electrodes that passing of a high-power low-voltage spark from said starting electrode to another electrode will effect sufficient ionization of said space between said front and back electrodes to result in initiation of said main arc by said power supply means, a large capacitor, means to charge said large capacitor to a relatively low voltage insufficiently high to generate a spark from said starting electrode to said other electrode in the absence of ionization of the space therebetween, circuit means to connect said large capacitor to said starting electrode and said other electrode, and extremely low-power means electrically connected to said starting electrode and other electrode to generate a low-power spark therebetween and thus effect ionization of said space therebetween, said low-power spark causing generation of said high-power low-voltage spark in said space by said large capacitor and thereby resulting in initiation of said main arc between said front and back electrodes.

PMT/B 6-5 (USP 3,152,907)
1. A light-sensitive photographic element including a support and a color-forming silver halide emulsion having increased speed and being capable of producing a dye image of increased contrast upon exposure and color development, comprising a photographic layer containing dispersed, discrete packets containing a silver halide selected from the class consisting of silver chloride and silver bromoiodide and a color-forming compound capable of coupling with the oxidation products of an aromatic primary amine photographic color-developing agent to produce a colored image, the silver halide in said packets being sensitized to a wavelength longer than blue said layer containing a spectrally unsensitized, unfogged silver chloride emulsion containing at least 80 mole percent of silver chloride and being of sufficiently low speed so that no visible image is produced therein upon exposure and color development of said spectrally sensitized silver halide emulsion, said unsensitized silver chloride emulsion being present in an amount of from 0.1 to 4 times the amount of silver per mole of silver in said spectrally sensitized silver halide emulsion and having a blue-light speed less than 1/100 that of said spectrally sensitized silver halide emulsion.

REFERENCE TEXTS

産業技術翻訳技能教育委員会
通信教育指導委員会

日本文「練習課題」に対する英訳の一例であります。産業技術翻訳技能教育委員会は、「標準答案」または「標準翻訳」など、「標準」という語を使用することを禁じておりますので、通信教育指導委員会は、同委員会の意向を汲んで、単にREFERENCE TEXT(S)としました。ここに掲げられている英文は、優れた翻訳の一例でありますから、受講者自身が行なった翻訳と照合して研究するために使用されることを望みます。

PMT/B 7 DEVELOPING AN ADEQUATE VOCABULARY - SOME LIVING EXAMPLES

PMT/B 7-1 Machine Tool Drives (I) · (USP 3,156,146)

In machine tools such as lathes,it is desirable to effect movement of a tool slide relative to a workpiece at a number of different preselected speeds. Aocording to the present invention,the improved drive consists of a plurality of drives,each effective to move the tool slide at a separate speed. In the present invention,a hydraulic rotary motor is utilized to effect a rapid traverse movement of the tool slide in a direction extending transversely of the axis of the machine tool spindle. A manual drive is also provided for effecting a slower movement of the slide in such direction. A third drive is operatable to effect movement of the tool slide in the transverse direction at a feed speed which is conventionally proportional to the speed of rotation of the work-supporting spindle. Each of these drives is effective to rotate the screw with respect to the fixed nut for moving the tool slide.

PMT/B 7-2 Machine Tool Drives (II)

It is an object of the invention to provide a machine tool drive of improved construction for moving a tool slide relative to a workpiece.
It is a further object of the invention to provide a machine tool drive including a hydraulic rotary motor for moving a tool slide with respect to a workpiece at a rapid traverse speed.
It is another object of the invention to provide a machine tool including a cross tool slide with a hydraulic rotary motor supported by the slide operatable to effect cross movement of the slide at a rapid traverse speed.
It is still another object of the invention to provide a machine tool including a plurality of drives for moving a tool slide at feed and rapid traverse speeds wherein the drives can be operated simultaneously without damage to the drives.
It is still further object of the invention to provide a machine tool as defined in the preceding object wherein the rapid traverse movement of the tool slide is effected by a hydraulic rotary motor.

PMT/B 7-3 End Bells for Electric Motors (I) (USP 3,161,794)

This invention relates generally to electric motors, and more particularly is directed to improvements in electric motors of the type including a stator which also forms the motor housing and which has bearing support members or brackets secured to its opposite ends to support the bearings in which the rotor shaft is rotatably mounted.
In motors of the described character, the bearing support members or brackets are usually in the form of generally spherical caps each having a peripheral portion secured to the adjacent end of the stator and

PMT/B 7-3 (Continued)
a central portion which is situated furthest from the rotor, in the axial direction, and which carries the bearings rotatably supporting the rotor shaft. Such bearing support members or brackets disadvantageously result in a motor having an undesirably large axial dimension, and they further have the disadvantage of requiring several manufacturing operations in order to fit the peripheral and central portions thereof to the stator and to the bearings for the rotor shaft.

PMT/B 7-4 End Bells for Electric Motors (II)
Accordingly, it is the principal object of the invention to provide bearing support members or brackets for electric motors of the described character which avoid the above mentioned disadvantages of the existing arrangements.
In accordance with an aspect of the invention, each of the bearing support members or brackets includes annular peripheral and central portions joined by a radially extending, annular end wall and extending generally axially from the latter in the same direction, with the edge surfaces of the annular peripheral and central portions being adapted to engage the stator and rotor assembly, respectively, while an annular recess opening axially between the peripheral and central portions is adapted to receive the usual head of the stator winding and a central recess surrounded by the annular central portion opens axially in the opposite direction and is adapted to receive a radial bearing in which the rotor shaft is rotatably mounted.

PMT/B 7-5 Acetonitrile Process (USP 3,161,669)
This invention relates to manufacture of lower aliphatic nitriles, particularly to manufacture of acetonitrile by reaction of ammonia with acetic acid or acetic anhydride.
An object of the invention is to provide a process for synthesis of an acetonitrile product substantially free of ketone by-products. A further object is to provide a process combining such synthesis with further purification of the ketone-free acetonitrile product. A further object is to produce high yields of acetonitrile, substantially free of ketone by-products, by reaction of acetic acid or acetic anhydride with ammonia in the presence of a selected catalyst.
Fig. 1 is a flow diagram illustrating a preferred embodiment of the invention. Fig. 2 is a detailed diagram illustrating a preferred embodiment of a reactor tube in the furnace of Fig. 1.
Referring to Fig. 1, acetic acid (or acetic anhydride) and ammonia are fed in vapor state into reactor tubes 1 in a furnace 2 where reaction temperature is maintained. As shown in Fig. 2 the reactor tube 1 is packed with catalyst 3; the pre-vaporized acetic acid (or acetic anhydride) and ammonia are fed through separate concentric tubes 4 and 5 which lead into the bottom of the reactor tube 1.

REFERENCE TEXTS

産業技術翻訳技能教育審議会
通信教育指導委員会

日本文「練習課題」に対する英訳の一例であります。産業技術翻訳技能教育審議会は、「標準答案」または「標準翻訳」など、「標準」という語を使用することを禁じておりますので、通信教育指導委員会は、同審議会の意向を汲んで、単にREFERENCE TEXT(S)としました。ここに掲げられている英文は、優れた翻訳の一例でありますから、受講者自身が行なった翻訳と照合して研究するために使用されることを望みます。

PMT/B 8 CONTEXT AFFECTING THE MEANING OF WORDS

PMT/B 8-1 Water Spraying Apparatus for a Hand Iron (USP 3,160,969)
Water spraying apparatus for a hand iron, comprising a water reservoir, a pumping and spraying device mounted in the reservoir at the top and front of the reservoir and comprising a plunger having a spray outlet above the reservoir, the plunger being slidable axially downwardly and upwardly in the reservoir between an upper and a lower position to pump water from the reservoir to the spray outlet, means for securing the reservoir at one side of the front of an iron with the spray outlet adapted to be aimed ahead of the iron, manually operable means movably carried by said apparatus and having a portion engaging said plunger and being movable relative thereto for sliding the plunger downwardly and upwardly along its longitudinal axis in response to movement of said manually operable means, said manually operable means including means to oscillate the plunger about its longitudinal axis as it slides, to direct the spray from side to side ahead of the iron.

PMT/B 8-2 Swivel Chair Support Construction (USP 3,161,396)
A swivel chair support construction comprising a spindle having one end adapted to be attached to a chair seat, a portion of said spindle being threaded for a sufficient distance to provide vertical adjustability of position of the chair to the desired extent, a nut engageable with the threaded portion of said spindle, said nut being divided axially into a plurality of separate parts to permit assembly thereof about and in threaded relation with the threaded portion of the spindle, and a cam engageable with said nut parts and adapted to be supported by a bearing for rotation about the axis of said spindle, said cam being arranged to hold said nut parts in rotatable threaded engagement with said spindle and to urge said nut parts into locking engagement with said spindle in response to the weight of said chair seat and its contents.

PMT/B 8-3 Voltage Control Circuits (1) (USP 3,156,860)
Voltage regulators commonly employed in direct current power supply work are essentially of two types, being either of a high efficiency switching type, characterized by high efficiency and high power outputs, or of a linear, dissipative kind, characterized by high speed regulation and wherein high accuracy may be more easily obtainable than with the switching type. The high speed voltage regulators normally employ a linear, dissipative network, acting as a variable impedance, connected in series with the load, and as the input voltage varies, or as the load current varies, the voltage drop across the linear dissipative network is caused to compensatingly change so as to maintain a constant load voltage. The high efficiency, high power voltage regulators normally employ switch type voltage control elements which periodically interrupt the rectified direct current which feeds the smoothing output filter element in such a manner that the time average of the rectifier-switch wave that

(See next page)

PMT/B 8-3 (Continued)
appears at the filter output is the desired output direct voltage level. This form of operation requires that the switch type voltage control element be capable of withstanding at least the full output voltage of the supply, since during the time that the switch is ""open" at least this voltage appears across it. Semiconductor or other type switching devices of inherently low inverse voltage capabilities cannot easily be employed in these regulators when high output voltages are desired since they cannot individually tolerate such high voltages. Their use in voltage regulator circuits has, therefore, normally been confined to low voltage applications wherein the output voltage does not exceed their inverse voltage.

PMT/B 8-4 Voltage Control Circuits (2)
Briefly, in accordance with one aspect of the invention, a voltage control circuit is provided wherein a source of alternating voltage is supplied to the primary winding of a power transformer, the secondary winding of which has a plurality of terminals which divide the secondary winding into a plurality of portions. Two full wave rectifying circuits and a semiconductor switch type control device are connected between said terminals and a load, one of said rectifying circuits coupling a first full wave rectified voltage of a first peak amplitude from one portion of said secondary winding to said load and the other of said rectifying circuits coupling a second full wave rectified voltage of a second peak amplitude level from a second portion of said winding to said load. The semiconductor switching device, which experiences a maximum inverse voltage substantially equal to the difference of the two peak amplitude levels, is connected in series with said other rectifying circuit and a source of control signals is applied thereto to cause the switching device to couple said first or second full wave rectified voltage to said load, the switching action being controlled so that the output voltage is equal to the time averaged value of said first and second full wave rectified voltages. The two full wave rectifying circuits may be realized by employing a bridge type rectifying circuit with a continuous winding or by employing half wave rectifiers in conjunction with paired secondary windings.

PMT/B 8-5 β-Sulfonation of Saturated Fatty Acids and Their Derivatives (USP 3,158,632)
This invention relates to new and useful improvements in the sulfonation of fatty acids and their derivatives. The invention more particularly relates to an improved process for sulfonating fatty acids or their derivatives, such as their esters or nitriles, using an excess of sulfur trioxide gas as the sulfonation agent.
Sulfonates of fatty acids and of fatty acid derivatives, such as esters or nitriles, constitute commercially valuable materials due to their surface-active characteristics and resistance to hard water which render the same suitable as detergents and wetting agents. These sulfonates are conventionally produced by the sulfonation of the corresponding fatty acids or fatty acid derivatives. When sulfonating these materials using an excess of gaseous sulfur trioxide, the reaction products produced were dark colored, brown-black products which, due to this discoloration,

(See next page)

PMT/B 8-5 (Continued)

were unsuitable for commercial use.
One object of this invention is the obtaining of lighter-colored reaction products, after the extensive sulfonation of falty acids or their derivatives, using gaseous sulfur trioxide, as the sulfonation agent.

REFERENCE TEXTS

産業技術翻訳技能教育審議会
通信教育指導委員会

日本文「練習課題」に対する英訳の一例であります。産業技術翻訳技能教育審議会は、「模範答案」または「標準翻訳」など、「標準」という語を使用することを禁じておりますので、通信教育指導委員会は、同審議会の意向を汲んで、単に REFERENCE TEXT(S) としました。ここに掲げられている英文は、優れた翻訳の一例でありますから、受講者自身が行なった翻訳と照合して研究するために使用されることを望みます。

PMT/B 9 STYLE OF SENTENCES

PMT/B 9-1 ROTARY POWER HAMMER (1) (USP 3,161,241)

This invention relates to portable power tools which rotate and axially hammer tool implements.
The principal object of this invention is to provide a handy portable power tool which will simultaneously rotate and hammer a tool implement and also selectively rotate the tool implement without hammering it or hammer it without rotating it.
Other important objects of this invention are: to provide a lightweight, inexpensive, and relatively simple power tool impact mechanism; to provide a novel impact mechanism which can be quickly and easily converted from applying axial impacts without rotation to applying axial impacts with rotation; and to provide a new type of power hammer.

PMT/B 9-2 ROTARY POWER HAMMER (2)

A power impact tool comprising:

(a) a frame;
(b) a rotary motor mounted on said frame and driving a pinion;
(c) a first carrier rotatably supported in said frame;
(d) a work implement slidably supported in said first carrier and adapted to receive periodic axial hammer blows;
(e) a piston reciprocably mounted in said first carrier;
(f) means for transmitting the reciprocation of said piston to said work implement as a series of hammer blows;
(g) a second carrier rotatably mounted in said frame;
(h) an epicyclic gear train interconnecting said first and second carriers to said pinion including a first gear fixed on one carrier and a second gear rotatably mounted on the other carrier;
(i) cam means engaged between one of said carriers and said piston for reciprocating said piston when relative rotation occurs between that carrier and said piston;
(j) key means locking said piston to the carrier which does not engage said cam means to prevent relative rotation therebetween while allowing the piston to reciprocate; and
(k) means for selectively locking either one of said carriers to said frame to prevent it from rotating whereby said work implement selectively can be simultaneously rotated and hammered or hammered without being rotated.

PMT/B 9-3 PROTECTION OF CIRCUIT ELEMENTS (1) (USP 3,161,778)

This invention relates to the protection of circuit elements and more particularly to power regulating systems and to means and methods for protecting such systems from damage by overloading.

(see next page)

(cont'd.)
Regulating systems such as power supplies may be either of series or shunt type. Such regulators are particularly susceptible to damage by excess surrent or voltage when an overload or short-circuit occurs at the output terminals of the supply. Since regulators generally comprise either delicate or expensive component elements, it is highly desirable to protect such elements from overload damage or destruction. The following description is concerned chiefly with series regulators; however an embodiment of the invention involving a shunt regulator also is described.

PMT/B 9-4 PROTECTION OF CIRCUIT ELEMENTS (2)
In a regulated power supply system, in combination first and second power supply units and a series regulator connected serially with each other and with a load circuit, a reference source, relatively quickly acting means to compare a circuit condition of the load circuit with a parameter of said reference source, said comparing means serving to control said series regulator to maintain substantially constant the said condition of the load circuit, power input varying means connected to vary the power delivered by at least one of said power supply units, and relatively slowly acting means sensitive to changes in potential across said series regulator for controlling said power input varying means to limit variations in the potential across the said series regulator resulting from the regulating action thereof.

PMT/B 9-5 PRODUCTION OF SODIUM BOROHYDRIDE (USP 3,379,511)
1. Process for the production of sodium borohydride which comprises heating an intimate mixture of (1) a finely divided borate composition selected from the group consisting of alkali metal borates, alkaline earth metal borates and mixtures thereof, the molar ratio of metal oxide B_2O_3 in said borate composition being less than 3:1 (2) finely divided Na_2O and (3) a finely divided reducing metal selected from the group consisting of silicon, aluminum and ferrosilicon under hydrogen at a pressure between atmospheric and about one atmosphere gauge pressure to a temperature sufficient to cause hydrogen to take up by the mixture and react therewith and maintaining a reaction temperature not exceeding about 550°C.
2. The process of claim 1 in which the molar proportion of borate composition to Na_2O is such to provide 1 to 1.3 mol of Na_2O per g. atom of boron and the quantity of reducing metal being from about stoichiometric up to an excess of about 20%.
3. The process of claim 2 in which the average particle size of the borate composition, Na_2O and reducing metal is below 10μ.
4. The process of claim 2 in which said reducing metal is silicon.
5. The process of claim 2 in which the major portion of the reaction is carried out at a temperature between about 420 and 500°C.
6. The process of claim 2 in which said intimate mixture of finely divided bofate composition, Na_2O and reducing metal is dusted into a reaction chamber preheated to reaction temperature and containing hydrogen at a pressure between atmospheric and about one atmosphere gauge pressure.

(see next page)

PMT/B 9-5 (Continued)
7. The process of claim 6 in which the reaction chamber is preheated to a temperature between about 420 and 550°C, and said intimate finely divided mixture is supplied thereto in such quantities and at such a rate that such temperature is maintained solely by the ensuing exothermic heat of reaction while said mixture is supplied thereto.

REFERENCE TEXTS

産業技術翻訳技能教育審議会
通信教育指導委員会

日本文「練習課題」に対する英訳の一例であります。産業技術翻訳技能教育審議会は、「標準答案」または「標準翻訳」など、「標準」という語を使用することを禁じておりますので、通信教育指導委員会は、同審議会の意向を汲んで、単にREFERENCE TEXT(S)としました。ここに掲げられている英文は、優れた翻訳の一例でありますから、受講者自身が行なった翻訳と照合して研究するために使用されることを望みます。

PMT/B 10 CREATIVE IMPULSE IN WRITING

PMT/B 10-1 Abstract of the Disclosure (1) (U.S.P. 3,483,487)

The present invention relates to a piston system with a ball-head link between the connecting rod and the piston, in which link the spherical seating has an extension which is flanged over after the ball has been inserted.

Piston systemsare known in which the ball is retained in the associated spherical seating by means of an additional fixing element. The fixing element must then be secured to the spherical seating by some auxiliary means. This cannot be achieved in the case of smaller pistons. Moreover, such a construction is expensive.

Attempts have also been made to form the spherical seating and the fixing elements in one piece, by flanging over an extension provided on the spherical seating, after the ball has been inserted. This in itself very advantageous solution does not however enable the ball to be mounted in a completely play-free manner, since the known bearing metals all have a more or less great inherent elasticity. If they are curved onto the ball until no play exists, they then spring back a little so that a small gap occurs. The greater the efforts to obtain better flanging characteristics without spring-back, the poorer the bearing properties become.

PMT/B 10-2 Abstract of the Disclosure (2) (U.S.P. 3,482,487)

1. A piston and connecting rod assembly comprising, a cup shaped piston, a metal bearing block in said piston having a semispherically shaped recess, a connecting rod having a spherically shaped ball at one end thereof, said ball being disposed in said recess in direct contact with the surface of said recess, said bearing block having a depending skirt portion in generally uniformly spaced surrounding relation to a lower portion of said ball beneath the center thereof, a layer of resilient plastic material compressed between said skirt portion and said lower portion of said ball, said layer occupying substantially the entire space between said skirt portion and said ball and exerting pressure against said skirt and said ball in directions normal to the surface of said lower portion of said ball.

2. A piston and connecting rod assembly according to claim 1 wherein said plastic material has the characteristics of a bearing material.

3. A piston and connecting rod assembly according to claim 1 wherein said plastic material has heat resistant characteristics up to the anticipated temperature to which it will be subjected in operation.

PMT/B 10-3 Control Circuit (1) (U.S.P. 3,161,782)
As the invention is particularly suited for use in temperature control the new circuit will be described in connection with such application. In the preferred embodiment of the invention the circuit is connected across diagonals of an alternating current Wheatstone bridge network in one arm of which is a temperature sensitive element such as a thermistor. The circuit is energized by transformer action from the same 110 v. A.C. power lines that provide the input for the bridge network. The control circuit includes two transistor amplifiers for amplifying the alternating current signal from the bridge when the bridge is unbalanced: a power output transistor in the collector circuit of which is the winding of the D.C. relay to be controlled; a shunting transistor which renders the circuit phase sensitive; and rectifying means for application of D.C. potentials to the collector terminals of the transistors.

PMT/B 10-4 Control Circuit (2) (U.S.P. 3,161,782)
1. A phase sensitive alternating current amplifier for control of a direct current output circuit in response to an alternating current signal comprising in combination an alternating current source of energy, an alternating current signal source, a transistor amplifier having a collector, a base and an emitter, current rectifying means connected in series with the collector and emitter of said transistor across said first mentioned source, means coupling said signal source to the base of said transistor to yield an amplified signal at its collector, a second transistor and an output transistor, each having a collector, a base and an emitter, the collector of said second transistor and the base of said output transistor being tied together and connected to the collector of said first transistor for reception of the amplified signal therefrom, the emitters of said second and output transistors being connected together and to said first mentioned source, a direct current output circuit connected between the collector of said output transistor and said current rectifying means for energization when said output transistor is rendered conductive by the half cycles of the signal of a given polarity impressed on its base and means for impressing alternating potentials on the base of said second transistor in phase with said first mentioned source whereby said second transistor shunts said output transistor during half cycles of said given polarity when the signal is in phase with said first mentioned source to render said output transistor conductive only during half cycles of out-of-phase signals.

PMT/B 10-5 Certain Modified Polyesteramides & the Use thereof as Adhesives (U.S.P. 3,380,840)
1. A modified polyesteramide prepared by reacting 0.5 to 50% by weight of an organic polyisocyanate or polyisothiocyanate with a polyesteramide prepared by reacting (1) polymeric fat acids derived from monobasic aliphatic carboxylic acids having hydrocarbon chains of 8-24 carbon atoms, said polymeric fat acids having a dimeric fat acid content of about 70 to 100% by weight, with about an equivalent amount of (2) an alkanolamine selected from the group consisting of monoethanolamine, 3-aminopropanol-1 and mixtures thereof.

(See next page)

PMT/B 10-5 (Continued)
2. The modified polyesteramide of claim 1 wherein the polyisocyanate or polyisothiocyanate is a diisocyanate or diisothiocyanate.

3. The modified polyesteramide of claim 1 wherein the alkanolamine is monoethanolamine.

4. The modified polyesteramide of claim 1 wherein the polymeric fat acids are derived from an acid mixture containing a substantial portion of linoleic acid.

5. An adhesive solution comprising an organic solvent and about 5 to 75% by weight based on the total composition of the modified polyesteramide of claim 1.

6. The adhesive solution of claim 5 wherein the solvent is toluene.

REFERENCE TEXTS

産業技術翻訳技能教育委員会
通信教育指導委員会

日本文「練習課題」に対する英訳の一例であります。産業技術翻訳技能教育委員会は、「標準答案」または「標準翻訳」など、「標準」という語を使用することを禁じておりますので、通信教育指導委員会は、同委員会の意向を汲んで、単に REFERENCE TEXT(S) としました。ここに掲げられている英文は、優れた翻訳の一例でありますから、受講者自身が行なった翻訳と照合して研究するために使用されることを望みます。

PMT/B 11 Objective of Claims: Mechanical Claims

PMT/B **11-1** A Filtering Device (U.S.P. 3,487,623)
A filtering device for a heat exchanger which includes a heat exchanger having a plurality of air passageways extending from a suction side for receiving an air flow through the heat exchanger, said device comprising:
frame having means for mounting the frame on the heat exchanger and having dimensions for surrounding the suction side of the air passageways, said frame having sides of substantial depth defining an opening spaced apart from the air passageways a substantial distance, said frame restricting the air flow to the suction side of the heat exchanger substantially through said opening:
porous member mounted on said frame across all portions of said opening for filtering the air flow therethrough;
wiping means including a pair of arms with each of said arms being mounted at one end on a common rotatable shaft on opposite sides of said porous member, each arm supporting a brush at the other end with one of the brushes engaging the outer surface of the porous member and the other brush engaging the inner surface so that both brushes sweep back and forth on the opposite surfaces of said porous member with the inner brush loosening material lodged on the outer surface of the porous member as the accumulated material is moved therefrom, each of said brushes having a backing member substantially wider than the bristles so that the backing member breaks up the air flow through the porous member adjacent the brushes to facilitate removal of the foreign material; drive means including a source of rotational motion and a linkage means for converting rotational motion to oscillatory movement interconnecting said arm adjacent to said one end and said source of rotational motion to oscillate said arms to oscillate the brushes back and forth across said porous member to remove foreign material accumulated thereon;
and
frame means supporting said linkage means and rotatably supporting said shaft relative to said porous member to enable each of said brushes to engage and sweep its respective surface of said porous member.

PMT/B **11-2** A Connecting Rod (U.S.P. 3,482,467)
A connecting rod for an engine comprising:
a tubiform midsection symmetrical about an axis, a wrist-pin end disposed at one end of said tubiform midsection and having a first bore disposed normal to said axis,
a crank-shaft end including a fork-end that is fixed to the tubiform midsection and including a bearing cap bolted to said fork-end forming a second bore parallel to the first bore,
said tubiform midsection including first opposite walls with outer surfaces thereof disposed tangent to the outer surface of said wrist-pin end, and being shaped so that the regions of tangency are substantially opposite across the axis of said first bore, and
said tubiform midsection having a greater section modulus near the crank-shaft end than the wrist-pin end.

(to be cont'd.)

PMT/B 11-3 A Justification Device for a Typewriter (U.S.P.3,491,872)
A justification device for a proportional spacing typewriter having a transversely movable carriage comprising means to be spaced according to a multiple of a predetermined unit space, at least one space bar depressible for causing said carriage to effect spaces between words, settable means manually settable from a rest position to a position corresponding to a correction required for justifying a line and means to restore said settable means stepwise upon depression of said space bar; wherein, the improvement comprises;
(a) normally ineffective control means for determinning the width of the spaces between the words to be effected by said carriage when said space bar is depressed;
(b) a pair of settable members comprised in said settable means, one of said settable members being settable according to the number of unit spaces by which the line is to be shortened, the other settable member being settable according to the number of unit spaces by which the line is to be lengthened;
(c) a cam element on each said settable member for rendering said control means effective as long as said settable means are located out of said rest position; and
(d) a common means comprised in said means to restore for restoring said settable members to said rest position.

PMT/B 11-4 A Fan Assembly of the Variable Air Delivery Type (U.S.P. 3,482,552)
In a fan assembly of the variable air delivery type operatively connected through a fan drive shaft and transmission means to an internal combustion engine such as that used in automotive vehicles, said assembly comprising;
(a) a first fan blade series rigidly mounted on said shaft,
(b) a second fan blade series arranged mechanically in parallel and coaxial relation with said first series and mounted rotatably on said shaft,
(c) a spring means provided between said second series and said shaft, and
(d) relative rotation limiting means provided between said first and said second fan blade series, wherein said first and said second fan blade series rotate whenever said fan drive shaft rotates and the blades of said second series are capable of angular displacement with respect to those of said first series from a position of interspaced relationship to a position of alignment to effectively reduce the number of blades in response to a condition of said engine.

PMT/B 11-5 An Automatic Speed Change Gear (U.S.P. 3,482,469)
An automatic speed change gear comprising an input shaft, a hydraulic torque converter connected to said input shaft, a Ravigneaux type first planetary gear assembly connected to said torque converter through a fist clutch means including at least one clutch, a first

(to be cont'd.)

PMT/B 11-5(cont'd.)
brake means selectively engageable with rotary element means of said first planetary gear assembly, a second planetary gear assembly connected to said first planetary gear assembly through a link means, a second brake means selectively engageable with rotary element means of said second planetary gear assembly, an output means connected to said second planetary gear assembly, and a second clutch means including a first and a second clutch, said first clutch for selectively coupling said input shaft to said second planetary gear assembly, and said second clutch for selectively coupling said input shaft to said first planetary gear assembly; said first planetary gear assembly being adapted to transmit input power from said torque converter to said second planetary gear assembly in at least three forward stages and a rearward stage; said second planetary gear assembly being adapted to deliver output power to said output means in at least three forward slow speed stages and a rearward stage when said first clutch of said second clutch means is not actuated and in at least three forward high speed stages when said first clutch of said second clutch means is actuated.

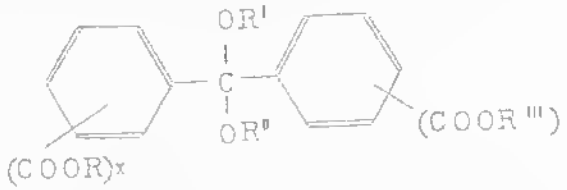
REFERENCE TEXTS

産業技術翻訳技能教育審議会
通信教育指導委員会

日本文「特許課題」に対する英訳の一例であります。産業技術翻訳技能教育審議会は、「標準答案」または「模範翻訳」など、「標準」という語を使用することを禁じておりますので、通信教育指導委員会は、同審議会の意向を汲んで、単にREFERENCE TEXT(S)としました。ここに掲げられている英文は、優れた翻訳の一例でありますから、受講者自身が行なった翻訳と照合して研究するために使用されることを望みます。

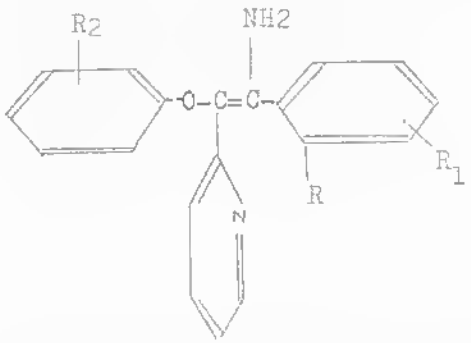
PWT/B 12 DESCRIPTION OF NEW MATTER-CHEMICAL CLAIMS

PWT/B 12-1 Novel Substances Represented by Structural Formula
KETAL-ESTER COMPOUNDS (U.S.P. 3,222,390)
(I) 1. Ketal-ester compounds having the formula:



where R, R', R'' and R''' are each selected from the group consisting of alkyl radicals having from 1 to about 12 carbon atoms, cycloalkyl radicals having from 3 to about 10 carbon atoms, aralkyl radicals having from 7 to about 12 carbon atoms and mixtures thereof, x and x' are each an integer from 0 to 5, and $x + x'$ is equal to at least 1.

(II) β-AMINO-α- PHENOXY-2-STILBAZOLE DERIVATIVES (u.s.p. 3,320269)
A compound of the formula

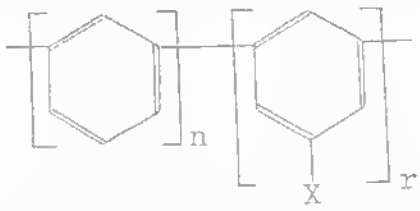


where R is a member of the class consisting of halogen, lower alkyl, lower alkoxy, trifluoromethyl, and methylthio; R_1 is a member of the class consisting of hydrogen, halogen, methyl, and methoxy; in combination R and R_1 at position 3 are the ---CH=CH—CH=CH-- radical; and R_2 is a member of the class consisting of hydrogen, halogen, lower alkyl and lower alkoxy.

PMT/B 12-2 Novel Substances Represented by Structural Formula

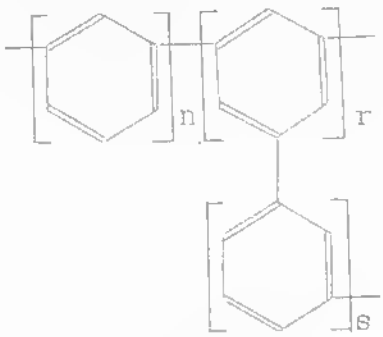
ARYL-HYDROCARBON POLYMERS (U.S.P, 3,320,183)

1. Solid copolymers consisting essentially of material having the structural formula



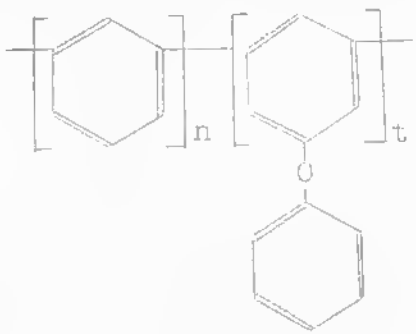
wherein x is a monovalent halogen substituent and n and r are both integers with n having a greater value than r.

2. Solid resinous branched polymers consisting essentially of material having the structural formula



wherein n, r, and s are all integers with n having a greater value than r and s having a value of at least 1.

3. Solid resinous polymers consisting essentially of material having the structural formula

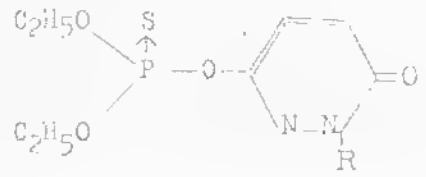


wherein n and t are both integers, and wherein the ratio n/t is varied according to the ratio of starting monomers.

PMT/B 12-3 New Matters Represented by Structural Formula

I THIOPHOSPHORIC ACID ESTERS (U.S.P. 3,310,560)

A thiophosphoric acid ester having the formula

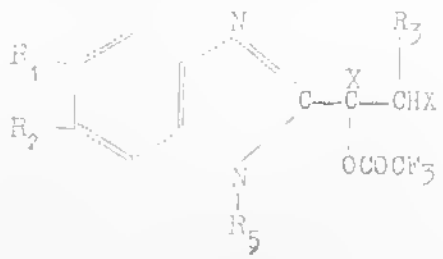


(I)

in which R is a member selected from the group consisting of hydroxy-ethyl, cyano-ethyl, lower alkoxy-carbonylmethyl, lower alkoxy-carbonyl-ethyl, di-lower alkyl-carbamyl-methyl and di-lower alkyl-carbomyl-ethyl radicals.

II TRIFLUOROACETOXY ALKENYL OR ALKYL BENZIMIDAZOLES (U.S.P. 3,320,273)

A compound of the formula



wherein R_1 and R_2 are selected from the group consisting of hydrogen, lower alkyl, lower alkoxy and trifluoromethyl, R_3 is selected from the group consisting of hydrogen and lower alkyl, R_5 is selected from the group consisting of hydrogen and trifluoroacetyl, and X is selected from the group consisting of chlorine and bromine, and the trifluoroacetic acid addition salts thereof.

PMT/B 12-4 New By Polymers and Composition

I POLYCARBONATES OF HYDROXY ETHYL ETHERS (U.S.P. 3,320,211)

A polycarbonate of (a) carbonic acid, (b) diol selected from the group consisting of aliphatic dihydric alcohols containing esterifiable hydroxy groups and alkylidene bis phenols and (c) a bis hydroxy alkyl ether of an alkylidene bis phenol and monoepoxy cyclopentadiene.

See next page

PAT/B 12-4 (Cont'd)

II WATER-RESISTANT POLYVINYL ALCOHOL ADHESIVES (U.S.P. 3,222,306)
A water-resistant adhesive comprising, in intimate admixture in water of polyvinyl alcohol, a sugar, a highly siliceous clay, and an alkali metal silicate,
said sugar being present in an amount that is from about 25 percent to 100 percent by weight of said polyvinyl alcohol, said clay being present in an amount by weight which is about twice the amount by weight of said polyvinyl alcohol, and said alkali metal silicate being present in an amount by weight which is about one-fifth the amount by weight of polyvinyl alcohol.

PAT/B 12-5 Materials Represented by Their Characteristic
POLYURETHANE PLASTICS PREPARED FROM ALKYLENE OXIDE ADDUCTS OF COMPOSITIONS COMPRISING A MAJOR PORTION OF TRIHYDROXYDIPHENYL (U.S.P. 3,330,781)
A polyurethane comprising the reaction product of at least one compound selected from the group consisting of organic polyisocyanates and polyisothiocyanates and a polyether-type resin comprising the reaction product of (a) an alkylene oxide having 2 to 6 carbon atoms and (b) a solid resinous material comprising a residue remaining in the still after removing technical grade resorcinol as a distillate, said solid resinous material being a dark brown brittle material having the following characteristics:

Ball and ring softening point, °C.	80 to 88
Water solubility, percent	20 to 25
Isopropyl alcohol solubility, percent	94 to 98½

and containing a trihydroxydiphenyl having the formula $(C_6H_3{-}{-}C_6H_4)3OH$ and dihydroxydiphenyl, said polyether-type resin having a hydroxyl number of about 25 to 510, a viscosity at 25° C. of about 400 centipoises to solid which softens at about 50° C., and a molar ratio of alkylene oxide to said solid resinous material of about 3-109:1.

REFERENCE TEXTS

産業技術翻訳技能教育委員会
通信教育指導委員会

日本文「特許明細」に対する英訳の一例であります。産業技術翻訳技能教育委員会は、「標準答案」または「標準翻訳」など、「標準」という語を使用することを禁じておりますので、通信教育指導委員会は、同委員会の意向を汲んで、単にREFERENCE TEXT(S)としました。ここに掲げられている英文は、優れた翻訳の一例でありますから、受講者自身が行なった翻訳と照合して研究するために使用されることを望みます。

PMT/B 13 PROBLEMS OF DEFINITIONS - ELECTRICAL CLAIMS

PMT/B 13-1 Electric Control Arrangements for Synchronous Machines (U.S.P. 3,492,555)

An Electric Control Arrangement for a synchronous machine which comprises: a Stator and a Rotor of a Synchronous Machine having a field winding in its rotor and an armature winding in its stator: a Rectifier which rotates with the said rotor of the synchronous machine and whose direct current terminals are electrically connected with the said field winding of the synchronous machine: A.C. exciting means provided with a primary winding consisting of a first portion and a second portion connected electrically in series with each other and provided with a secondary winding which is coupled electromagnetically with the primary winding and is connected electrically with the said rectifier A.C. terminals and is further arranged for rotating with the said rectifier and the said field winding: an outside electric equipment which is provided outside of the said synchronous machine and is electrically connected with a series connection composed of the said armature winding of the synchronous machine and the said first and second portion of the primary winding for A.C. exciting means: wherein an electrically closed circuit is formed by connecting electrically in series a portion of the said armature winding of the synchronous machine, the first portion of the said primary winding of the A.C. exciting means and an impedance device.

PMT/B 13-2 Static Switching Controllers for Effecting Connection to a D.C. Electric Motor and Disconnection from the Motor of a Battery (USP 3,492,557)

A static switching controller for effecting connection to a D.C. electric motor and disconnection from the motor of a D.C. source comprising a first thyristor means connected in series with the motor and the source, a capacitor means, a second thyristor means, connected in series with the capacitor means across the first thyristor means, for turning off the first thyristor means when the second thyristor means is fired and for forward charging the capacitor means, and means for reversing the charge on the capacitor means while the first thyristor means is in a conduction condition, characterized in that the means for reversing the charge on the capacitor means includes a three terminal semiconductor device and part at least of the source, connected in series with the first thyristor means and the capacitor means to provide a charge reversal path for the capacitor means.

PMT/B 13-3 Windshield Wiper Control System (USP 3,492,558)

A windshield wiper control system for intermittently effecting operation of a drive mechanism for a wiper blade at controllable intervals comprising:

(a) an electric power supply;

(b) an electrically energizable device for initiating operation of the drive mechanism;

(c) first and second control switches connected across said power supply in series with said device;

(d) semiconductor switching means having an output circuit in series with said first and second switches and an input circuit in series with one of said switches and in parallel with the other switch;

(e) said switching means including a semiconductor element having power electrodes between said switches and defining a part of said output circuit;

(f) said input circuit rendered conductive in response to closing of said one of said switches and operable to condition said semiconductor to a conductive state whereby subsequent closing of said other switch completes an energizing circuit through said output circuit to said device to immediately provide an initial cycle of the drive mechanism; and

(g) timing circuitry connected in said input circuit for governing the conductive condition of said input circuit subsequent to the initial cycle of said drive mechanism;

(h) said timing circuitry including elements for preventing said input circuit from rendering the output circuit conductive for a predetermined interval after each cycle and enabling conduction of said output circuit at the end of said interval.

PMT/B 13-4 Comparison and Control Circuit Using Latch Type Semiconductor Switch (U.S.P. 3,492,554)

1. A comparison circuit comprising a pair of parallel current paths connectable between a voltage source and a common terminal, a latch type solid state switch and impedance means connected in series in each of said paths, a commutating capacitor connected between said paths, a saturable magnetic core member having respective output windings which develop opposed polarity signals, said output windings respectively coupled to said switches to control the gating thereof, at least one comparison signal winding coupled with said core, and an input winding for coupling a fluctuating signal with said core whereby the conductivity states of said switches at any time is dependent on the net input ampere turns applied to said core member by said input and comparison windings.

2. A comparison circuit as set forth in claim 1 wherein at least two comparison signal windings are coupled with said core for application of opposing ampere turns comparison signals.

3. A comparison circuit as set forth in claim 2 wherein a pulse generator is coupled to said fluctuating input winding and generates pulses adequate in amplitude to switch the saturation state of said core when

(See next page)

PWT/B 13-4 (Continued)
no comparison signal ampere turns are applied to said core.

PWT/B 13-5 Control System for Electrically Powered Vehicles (U.S.P. 3,492,556)

A control system for an electrically powered vehicle comprising in combination:

(a) a direct current generator having a shunt field;

(b) power means mechanically coupled to said generator for driving same;

(c) means for supplying excitation to said generator shunt field;

(d) one or more direct current electric drive motors each having a shunt field;

(e) means for supplying excitation to said motor shunt fields;

(f) means responsive to the magnitude of a control signal to simultaneously decrease the generator shunt field excitation and increase the motor shunt field excitation and vice versa;

(g) said generator excitation supply means including a main controller having a range of positions controlling a corresponding range of magnitudes of generator excitation;

(h) means determining the magnitude of said control signal including means for deriving a second signal which is a function of drive motor speed and an auxiliary controller having a range of positions and positioned responsive to the positioning of said main controller, and means applying said second signal in circuit with said auxiliary controller such that the drive motor speed at which said second signal will become effective to affect the magnitude of said control signal is determined by the position of said auxiliary controller.

REFERENCE TEXTS

(RVD-4903-200)

産業技術翻訳技能教育委員会
通信教育指導委員会

日本文「翻訳課題」に対する英訳の一例であります。産業技術翻訳技能教育委員会は、「標準答案」または「標準翻訳」など、「標準」という語を使用することを禁じておりますので、通信教育指導委員会は、同委員会の意向を汲んで、単にREFERENCE TEXT(S)としました。ここに掲げられている英文は、優れた翻訳の一例でありますから、受講者自身が行なった翻訳と照合して研究するために使用されることを望みます。

PMT/B 14 PROOF OF UTILITY - PHARMACEUTICAL CLAIMS

PMT/B 14-1 Vitamin B_{12} Products and Preparation thereof (U.S.P. 2,830,933)

The resin adsorbates of this invention are particularly useful when blended with multivitamin and multimineral components, this is, useful forms of thiamin, riboflavin, pyridoxine, pantothenic acid, manganese, zinc, iodine, copper and so forth. This is particularly true when the compositions contain ascorbic acid or an ascorbate and/or a ferrous salt.

The vitamin adsorbates may be incorporated with suitable excipients, such as flavoring agents, sweetening agents, binders, and other materials of this type. The compositions may be packaged in capsules or these materials, with a suitable binding agent, may be prepared in the form of tablets. Various natural and synthetic gums serve well as binding agents for tablets. Furthermore, the products of the present invention may be incorporated in suspensions for oral administration. Such suspensions is which the vitamin-resin product must be prepared in the form of very finely divided particles may also contain suspending agents, wetting agents and various flavoring and sweetening agents. The resin product containing the vitamin may be finely ground or the resin itself may be ground before adsorption of the vitamin.

The products of the present invention have certain definite advantages when administered to patients or to animals requiring such treatment. The vitamin adsorbed on the resin is appreciably protected from the action of the acid gastric juices and passes practically unchanged through the gastric system into the intestinal tract which having a higher pH, is effective in removing the vitamin from adsorption on the resin, and the vitamin is thereupon adsorbed into the system at its normal site in the intestine.

PMT/B 14-2 Sustained Release Pharmaceutical Preparations (U.S.P. 2,809,918)

The medical profession frequently has need for drugs or medicaments which can be administered to the patient for purposes of achieving a very quick pharmacological therapeutic effect and will also maintain such effect over a prolonged period of time. Unfortunately, many drugs and particularly sedatives and hypnotics usually produce sedated or narcotized condition of relatively short duration and are administered in comparatively light doses in order to avoid toxic reactions or other side effects which would be harmful to the patient. Similarly, there are some syndromes which may call for administration of a drug which should enter the patient's system in small doses at spaced intervals.

REFERENCE TEXTS

[illegible] REFERENCE TEXT(S) [illegible]

PMT/B 15 Claiming the Invention - Mechanical Claims

PMT/B 15-1 Turning and boring head (U.S.P. 3,494,388)
In a machine for [illegible] material by cutting, the combination of a drive shaft, a bearing member mounted on and fixed to the drive shaft eccentrically thereof, a head journaled on the bearing member for rotation relative thereto, a face plate on one end of the head, a ring gear at the opposite end of the head, means for detachably mounting the ring gear on the head, a stationary gear in mesh with the ring gear, means for rotating the drive shaft to cause turning movement of the head in the same direction thereto, holder means mounted in opposite relation to said face plate, cutter means, means for selectively mounting a workpiece between said holder means and said face plate, and means for mounting said cutter means in position to engage a workpiece held by said mounting means, whereby rotation of said head causes relative movement between said workpiece and said cutter for operation either as a turning head or a boring head, said bearing member having a cylindrical bearing surface, said bearing member having a central axis substantially parallel to and spaced from the central axis of said driveshaft, said head including a sleeve having an internal cylindrical surface, said sleeve being mounted coaxially on said bearing member surface, said face plate being secured on said sleeve.

PMT/B 15-2 Helical spring lockwasher (U.S.P. 3,494,400)
A metal lockwasher comprising a helical coil having more than one full turn of a wire of trapezoidal cross section, the parallel sides of the trapezoidal wire extending respectively along the inner and outer periphery of the helical turns, the longer of the parallel sides being disposed along the outer periphery and the end bearing surfaces of an arcuate end portion at each end of the helical coil lying in transversely extending parallel planes, the helical coil having at least one and three quarter turns and less than two turns and the end bearing surfaces extending around the respective arcuate end portions through an angle of at least 120 degrees from each end of the coil, and a deposit over the arcuate planar end surfaces of a layer of a metal softer and more malleable than the metal forming the coil, said deposit consisting essentially of a first layer of tin, a second superimposed layer of zinc and a third outer layer of tin.

PMT/B 15-3 Rotary distributor pump (U.S.P. 3,494,288)
In a fuel pump adapted to be used as an injection pump for internal combustion engines and the like, said pump having a pump body, a rotor mounted within the body, fuel injecting means including pumping means disposed within the body and actuated by rotation of the rotor relative to the body for delivering charges of fuel under high pressure at spaced intervals, first conduit means receiving the output of the fuel injecting means and being adapted to be connected to an engine cylinder through a pressure actuated delivery valve interposed in the first conduit means

(See next page)

PMT/B 15-3 (Continued)
in advance of the cylinder, and a spill valve which is adjustable between first and second terminal positions and which spills fuel from the first conduit means interposed in the first conduit means in advance of the delivery valve to control the injection of fuel into the engine with each fuel injecting operation of the pumping means, the improvement which comprises second conduit means receiving fuel spilled by the spill valve, means having a restricted orifice interposed in the second conduit means, means responsive to the pressure of the thus spilled fuel in advance of said orifice for urging the spill valve toward its first terminal position, and yieldable means for constantly urging the spill valve toward its second terminal position.

PMT/B 15-4 Pulleys (U.S.P. 3,494,212)
1. A pulley means comprising a pair of annular side cheek means which are adapted to be removably secured in facing relationship with each other along opposite radial faces of a rotary hub member, which cheek means each including a respective surface portion along which there is integrally moulded a respective separate layer of an elastomeric material, both of which layers in combination define a circumferential surface along which a pulley cable may lie, said cheek means with their respective integrally moulded layers of material being readily separable from each other and from a hub in which said cheeks are adapted to be rigidly secured.
2. The pulley means of claim 1 including a hub member extending radially between said cheek means, means rigidly but removably securing said cheek means to the opposite radial faces of said hub member, the inner radial periphery of said layers resting against the outer radial periphery of said hub member whereby the latter supports said layers against radially inwardly directed forces.

PMT/B 15-5 Piston (U.S.P. 3,494,262)
In combination with an engine cylinder, a piston and piston ring assembly mounted in said cylinder comprising a piston having a head portion of smaller diameter than the cylinder, a skirt portion and a wrist pin boss portion, said wrist pin boss portion providing a bearing surface adapted to receive a wrist pin, said head portion having at least one compression ring groove, (an oil ring groove closely adjacent a compression ring groove, and a land between said compression ring groove and said oil ring groove, a compression ring in said compression ring groove sealingly engaging said cylinder, an oil ring in said oil ring groove engaging said cylinder and adapted to scrape oil from said cylinder below said compression ring, said land, oil ring, compression ring, and cylinder co-acting to define an annular chamber around the piston head, said oil ring metering oil from said cylinder into said chamber and effective to entrap oil in said chamber during reciprocation of the piston in the cylinder for creating a pressurized source of oil, and a small diameter bore passageway in said piston directly connecting said chamber with the bearing surface of said pin boss portion for delivery of pressurized oil to said surface whereby a wrist pin in said boss portion is continuously lubricated with pressurized oil during reciprocation of the piston in the cylinder

REFERENCE TEXTS

産業技術翻訳技能教育審議会
通信教育指導委員会

日本文「練習課題」に対する英訳の一例であります。産業技術翻訳技能教育審議会は、「標準答案」または「標準翻訳」など、「標準」という語を使用することを禁じておりますので、通信教育指導委員会に、同審議会の意向を汲んで、単にREFERENCE TEXT(S)としました。ここに掲げられている英文は、優れた翻訳の一例でありますから、受講者自身が行なった翻訳と照合して研究するために使用されることを望みます。

PMT/B 16 Negative Limitations - Chemical Claims

PMT/B 16-1 Aluminum base casting alloys (U.S.P. 3,322,533)

(I) An aluminum base casting alloy consisting of from 5.5 to 8.5 percent by weight zinc, from 0.55 to 0.95 percent by weight magnesium, at least one of the members of the group consisting of titanium in an amount from 0.07 to 0.2 percent by weight, boron in an amount from 0.0005 to 0.002 percent by weight, and zirconium in an amount from 0.05 to 0.25 percent by weight, and the balance aluminum, chromium being excluded from said alloy so as not to exceed 0.02 percent by weight, silicon being excluded from said alloy so as not to exceed 0.15 percent by weight, iron being excluded from said alloy so as not to exceed 0.15 percent by weight, and other impurities comprising less than 0.75 percent by weight of said alloy.

Production of cesium (U.S.P. 3,322,531)

(II) A method of producing cesium which comprises the steps of reacting sodium and pollucite at a temperature between about 900° F. and 1300° F. and in the absence of atmosphere reactive with alkali metals, using at least about 5 moles of sodium for each molecular weight of cesium contained in said pollucite, said pollucite being in the form of lumps of at least about 3/8 inch size, and recovering by filtration the cesium produced.

PMT/B 16-2 Polymerization process using an organomagnesium compound as catalyst (U.S.P. 3,222,339)

A process for polymerizing at least one ester of an acid from the class consisting of acrylic acid and methacrylic acid, which esters are free of groups having hydrogen reacting in the Zerewitinoff test, which comprises mixing between about 3° and 40° C. said ester and about 0.3 to about 1.5 moles of an organomagnesium compound per mole of said ester, the organomagnesium compound being of the formula

R--Mg--Y

wherein R is a member of the class consisting of alkyl, cycloalkyl, aralkyl, aryl, alkenyl, aralkenyl, and alkynyl groups and Y represents a member of the class consisting of bromine and said R group, whereby a catalyst solution is formed, mixing said catalyst solution and a said ester in a ratio giving about 0.01 to about 0.2 mole of organomagnesium compound per mole of ester, cooling the resulting mixture, and maintaining it at a polymerizing temperature between 0° and -100° C. until polymer is formed.

PMT/B 16-3 Method of making a granulated peat fertilizer (U.S.P. 3,307,934)

(I) A process for preparing granular fertilizer materials which comprises forming a composition comprising peat, water and a fertilizer salt selected from the group consisting of ammonium sulphate, monoammonium phosphate, diammonium phosphate, potassium phosphate, monocalcium phosphate, potassium chloride and potassium sulphate, agitating the said composition to form granules, drying the granules at a temperature of less than 110° C. in the absence of substantial movement between the granules and recovering the dried granules, the water content of the composition which is agitated being in the range 30-55% by weight based on the weight of the composition and the proportion of peat being in the range 20-60% by weight based on the weight of the fertilizer salt on a dry basis.

Calcium chloride treatment of oxygen-process steel fume (U.S.P. 3,318,685)

(II) 1. A method for producing hard agglomerates suitable for a furnace charge from particulate oxidized iron material, wherein said agglomerates are substantially free from zinc and lead impurities, comprising the steps of agglomerating a mixture comprising said particulate oxidized iron, carbon and calcium chloride and heating the resulting agglomerates at a temperature of from about 1100° to 1500° C.

2. An agglomerated particulate oxidized iron material product containing from about 2 to 25% calcium chloride, from about 1 to 10% carbon and sufficient water to impart an agglomerating consistency to the material wherein said particulate oxidized iron material contains zinc and lead impurities and is produced by oxygen steel processes.

PMT/B 16-4 Process for producing silicon steel with preferred orientation (U.S.P. 3,152,929)

In the process of producing silicon-iron sheets having a high proportion of cube-on-face grains, the steps comprising annealing cold rolled sheets of a thickness of from 0.1 to 30 mils of silicon-iron comprising from 1% to 10% silicon, the balance being essentially iron except for small additions and incidental impurities at a temperature of from 1100° C. to 1425° C. in an atmosphere which during at least the initial stages of the annealing will produce on the sheets a bright metallic surface, free from any continuous films, said atmosphere containing as an essential component to provide an acceleration for cube-on-face grain growth, a vapor of at least one material reactive with the silicon-iron which at the annealing temperature and at the partial pressure thereof in the annealing atmosphere is capable of forming transient but not stable reaction products on the surface of the sheets,

(See next page)

PMT/B 16-4 (Continued)
said vapor comprising at least one halogen element from the group consisting of chlorine, bromine and iodine, and hydrogen chloride, hydrogen bromide and hydrogen iodide which dissociate at the annealing temperatures, the partial pressure of said vapor being in the range of from 0.1 to 100 millimeters of mercury, and continuing the annealing until the surfaces are bright and substantially complete cube-on-face grain growth by secondary recrystallization takes place.

PMT/B 16-5 Process for producing castings from an iron alloy containing silicon (U.S.P. 3,318,691)
A method for the preparation of free cutting, machinable ferro-silicon alloys comprising melting in a cupola furnace a steel yielding batch containing at least 30% by weight of steel scrap, and substantially devoid of alloying additives, maintaining said molten batch at a temperature of at least 1600° C., tapping off said molten batch into a ladle at substantially the same temperature into which ladle between 1 to 3% by weight referred to the final alloy of calcium silicon and 5 to 20% by weight of silicon referred to the final alloy are contained, dispersing said silicon and said calcium silicon throughout, casting said molten batch and cooling said batch until solidification is obtained, thereafter, re-melting in a crucible furnace and re-casting the resultant alloy at a temperature of about 1250° C. in the form of pigs.

REFERENCE TEXTS

産業技術翻訳技能教育審議会
通信教育指導委員会

日本文「練習課題」に対する英訳の一例であります。産業技術翻訳技能教育審議会は、「標準答案」または「標準翻訳」など、「標準」という語を使用することを禁じておりますので、通信教育指導委員会は、同審議会の意向を汲んで、単に REFERENCE TEXT(S) としました。ここに掲げられている英文は、優れた翻訳の一例でありますから、受講者自身が行なった翻訳と照合して研究するために使用されることを望みます。

PMT/B 17 Unnecessary Limitations - Electrical Claims

PMT/B 17-1 Signal detector circuit (U.S.P. 3,495,097)

1. A sine wave signal detection circuit comprising: means for chopping said sine wave signals for producing a sequence of discrete pulses for each half cycle of said sine wave, said pulses being positive for positive half cycles of said sine wave and negative for negative half cycles of said sine wave, means for differentiating said sequence of discrete pulses for producing a sequence of alternating positive and negative spike pulses for each half cycle of said sine wave, and means for smoothing said spike pulses of one selected polarity for producing an output signal having an amplitude level representative of the amplitude of said sine wave signal.

2. A sine wave signal detection circuit according to claim 1 wherein said means for chopping said sine wave signal includes a field effect transistor having a source connection, a drain connection and a gate connection, and a source of chopping signal connected to said gate connection, said sine wave signal being applied to said source connected of said field effect transistor and portions of said sine wave signal being gated to said drain connection by said chopping signal applied to said gate connection.

PMT/B 17-2 Synchronous symmetrical A.C. switch (U.S.P. 3,495,098)

A synchronous symmetrical switching circuit comprising:
(a) a controlled bi-directional gate device having a first terminal electrode, a second terminal electrode, and a control electrode, said device being rendered conductive in a first direction between said terminal electrodes when a signal of sufficient value and of a given polarity is applied to said control electrode and when a voltage above a first threshold value of insignificant magnitude and of one polarity is applied between said first and second terminal electrodes, said device being rendered conductive in the opposite direction between said terminal electrodes when a signal of sufficient value and of a given polarity is applied to said control electrode and when a voltage above a threshold value of insignificant magnitude and of a polarity opposite to said one polarity is applied between said terminal electrodes;
(b) means for connecting a load device and an alternating current source in circuit with said terminal electrodes;
(c) means for triggering said bi-directional gate device into conduction in said first direction upon the application of an alternating current half cycle of said one polarity to said first terminal electrode of said gate device;
(d) a capacitive time constant circuit;
(e) means for charging said time constant circuit across said load device when said bi-directional gate device is conducting current in said first direction;
(f) means connected to the control electrode of said bi-directional gate

(to be cont'd.)

2. A control circuit as in claim 1 in which said voltage divider has a predetermined effective input impedance and in which said constant current source produces a current of a predetermined magnitude such that the product of said current magnitude and said effective input impedance is a power of ten, whereby said percentage and offset values for the same setting of said variable output means are related by a power of ten.

PET/B 17-5 Three-phase full wave rectifier for a three-phase four-wire alternating current supply (U.S.P. 3,492,560)

1. A full wave rectifier for three-phase alternating current wherein the three-phase system includes a neutral line and three-phase lines, said rectifier comprising:

(a) a positive and a negative load buss to be connected to a load:

(b) three pairs of switches each of said pair of switches having the output of one of said pair adapted to be connected to said positive load buss and the output of the other of said pair adapted to be connected to said negative load buss and each of said pair of switches having a different one of said three-phase lines directly connected thereto as an input:

(c) first switch closing means coupled to a first three of said switches for closing an individual switch only when the other two phases not connected thereto are both of a first polarity whereby each of said first three switches is closed for substantially one-sixth of a phase cycle and connects a selected portion of the phase on the input line which is of the opposite polarity to the load buss of that polarity:

(d) second switch closing means coupled to the second three of said switches for closing a switch only when the other two phases are of said opposite polarity whereby each of said second three switches is closed for substantially one-sixth of a phase cycle and connects a selected portion of the phase on the input line which is of said first polarity to the load buss of like polarity: and

(e) means coupled to said neutral line and to said positive and negative busses for selectively coupling the de-energized buss to said neutral line whereby the current always flows through the load in the same direction to the neutral line.

REFERENCE TEXTS

産業技術翻訳技能教育審議会
通信教育指導委員会

日本文「練習課題」に対する英訳の一例であります。産業技術翻訳技能教育審議会は、「標準答案」または「標準翻訳」など、「標準」という語を使用することを禁じておりますので、通信教育指導委員会は、同審議会の意向を汲んで、単にREFERENCE TEXT(S)としました。ここに掲げられている英文は、優れた翻訳の一例でありますから、受講者自身が行なった翻訳と照合して研究するために使用されることを望みます。

PMT/B 18 Compounds in Prior Art-Pharmaceutical Claims

PMT/B 18-1

(I) Pharmaceutical preparations (U.S.P. 3,322,633)
A process for the preparation of a prolonged acting pharmaceutical composition which comprises the steps of (1) intimately admixing a pharmacologically active material with (a) an inert, insoluble matrix-forming substance selected from the group consisting of

$$CaSO_4 \cdot \tfrac{1}{2} H_2O$$

anhydrous calcium phosphate, and a mineral mixture consisting essential of 70-75% Al_2O_3, 3-4% Fe_2O_3, 11-12% SiO_2, 3-4% TiO_2 and 4-6% volatile material, and mixtures of $CaSO_4 \cdot \frac{1}{2}H_2O$ and said mineral mixture;(b)a hydrophobic substance selected from the group consisting of non-hydrophilic salts of metals selected from the group consisting of alkaline earth metals and aluminum; (c) a binding agent selected from the group consisting of methyl cellulose, ethyl cellulose, polyvinyl acetate, polyviny pyrrolidone, cellulose acetate, zein, kafirin, hordenine, gliadin and mixtures thereof, said active material and ingredients (a) to (c) all having substantially the same particle size,
(2) wetting said intimate admixture with a granulating agent comprising an alcoholic solution of a member selected from the group consisting of colophonium,a mixture of colophonium and polyvinyl pyrrolidone, and a mixture of colophonium and polyethyleneglycol, whereby a mixture of said inert, insoluble substance is formed having embedded therein the other ingredients, and
(3) drying and recovering the matrix so obtained in a pharmaceutically useful form.

PMT/B 18-2

(I) Nongranulated compressed tablets of ascorbic acid with microcrystalline cellulose (U.S.P. 3,396,226)
Compositions suitable for direct compression into tablets without prior granulation procedures and containing ascorbic acid having average particle sizes such that not more than about 60 percent of the weight thereof is retained of a 100 mesh screen, and at least about 30 percent of the weight thereof passes through a 200 mesh screen, microcrystalline cellulose and/or cornstarch having a high amylose content and a suitable lubricant or lubricant mixture,

(II) Anesthesia method and compositions using 1,1,1-trifluoroethyl chloride (U.S.P. 3,325,352)
A method for producing at least reduced perception of pain in a human, dog, cat, rat, rabbit or monkey subject, said method comprising the step of:

PMT/B 18-2 (continued)

introducing into and circulating through the respiratory system of said subject a non-toxic, non-inflammable gaseous mixture consisting essentially of:
(1) a relatively pure quantity of CF_3CH_2Cl in sufficient vol. percent to produce a state of reduced perception of pain in the subject, but less than that vol. percent which is toxic to said subject;
(2) from zero to less than a toxic vol. percent of other halogenated hydrocarbon anesthetics; and
(3) a balance consisting essentially of a non-toxic carrier gas containing sufficient uncombined oxygen to provide said mixture with an uncombined oxygen content of at least 15 vol. percent.

PMT/B 18-3

(I) Acetylmethyl-salicylate for pain relief (U.S.P. 3,119,739)
A method for the alleviation of pain occuring on the surface of the human body and resulting from the bites and stings of insects and from hives and rashes, which comprises applying to the affected areas compositions containing as the essential active ingredient from 1 to 20% by weight of acetyl methyl salicylate.

(II) Process of effecting diuresis with lower alkyl disulfamylaniline compounds (U.S.P. 3,164,517)
The process of effecting diuresis which comprises administering a diuretic amount of a disulfamylaniline compound of the formula

wherein Alk is lower alkyl.

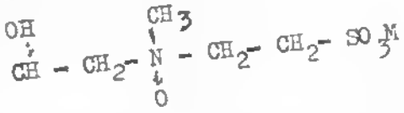
(III) Veneer coated tablets (U.S.P. 3,116,205)
A coated pharmaceutically acceptable tablet in which the coating comprises a film of a resin of terpene polymers melting in the range of about 70°C.-135°C.

PMT/B 18-4

(I) Pharmaceutical composition for treating nausea and vomiti (U.S.P. 3,172,806)
A pharmaceutical preparation in unit dosage form comprising from about 200 to about 600 parts of 4-(2-dimethylaminoethoxy)-N-(3,4,5-trimethoxybenzoyl) benzylamine hydrochloride, from about 10 to about 75 parts of pyridoxine hydtochloride, from about 60 to about 140 parts of carnauba wax and from about 75 to about 150 parts zein.

(II) Dentifrice compositions containing surface-active N-(2-hydroxyalkyl)-N-methyltaurine -N-oxide (U.S.P. 3,171,787)
A dentifrice composition comprising an abrasive and a compound of

PMT/B 18-4 (continued)
the formula



wherein R is an alkyl group having from 8 to 18 carbon atoms and M is selected from the group consisting of hydrogen and the alkali metals.

PMT/B 18-5

(I) Pharmaceutical compositions and method of preparing the same (U.S.P. 3,116,204)
A method for the preparation of vitamin tablets containing at least the vitamin activity of nicotinamide and asc rbic acid which comprises directly compressing non-granulated nicotinamide ascorbate into tablets. A vitamin tablet containing at least the vitamin activity of nicotinamide and ascorbic acid comprising compressed non-granulated nicotinamide ascorbate.

(II) Method of stimulating appetite and relieving Parkinson's symptoms (U.S.P. 3,172,807)
A method of stimulating appetite in humans which comprises oral administration of from .2 to 3 cc. of a compound selected from the group consisting of furfural and furoic acid at intervals of about 24 to 48 hours.

(RVD-4903-200)

REFERENCE TEXTS

産業技術翻訳技能教育審議会
通信教育指導委員会

日本文「練習課題」に対する英訳の一例であります。産業技術翻訳技能教育審議会は、「標準答案」または「標準翻訳」など、「標準」という語を使用することを禁じておりますので、通信教育指導委員会は、同審議会の意向を汲んで、単にREFERENCE TEXT(S)としました。ここに掲げられている英文は、優れた翻訳の一例でありますから、受講者自身が行なった翻訳と照合して研究するために使用されることを望みます。

PMT/B 19 Proper Usage of Words (1) "Comprising"

PMT/B 19-1 (ME) Electromagnetic clutch (U.S.P. 3,491,866)

1. An electromagnetic clutch comprising:
first and second co-axial torque transmitting members;
said first member having a generally-cylindrical surface and including a plurality of circumferentially-spaced, axially extending, electromagnetic flux conducting armature segments;
said armature segments arranged to be electromagnetically insulated from each other and adapted to execute limited radial movement toward said second member;
said second member having a plurality of radially extending electromagnetic flux conducting disk portions adapted at their circumference for engagement with said armature segments whereby said armature segments provide a flux conducting path between adjacent disk portions;
resilient means operative to bias said armature segments away from said second member; and
means for generating an electromagnetic flux within said second member whereby said flux is substantially uniformly distributed about the circumference of said disk portions.

2. The device claimed in claim 1 wherein said armature segments are fixedly received in slotted portions of said first torque transmitting member and said slotted portions of said first torque transmitting member are separated from each other by notches in said first torque transmitting member between said slots and limited radial movement is accomplished by deflection of said armature segments and said slotted portions.

PMT/B 19-2 (ME) Servo operated gear shift bar mechanism (U.S.P. 3,491,863)

1. A servo mechanism for synchronizing gear shifting operations of a supplementary gear assembly disposed between a power input shaft and a power output shaft and having a first intermeshing gear means for positively coupling the shafts at a first gear ratio and a second intermeshing gear means for positively coupling the shafts at a second gear ratio a displaceable shifter collar for alternatively actuating the first and second intermeshing gear means and a shifter fork for displacing the shifter collar,
the improvement comprising a synchronizing cylinder,
a gear change cylinder,
a displaceable gear shifting shaft extending through said synchronizing cylinder and into said gear change cylinder, said shaft extending parallel to the power output shaft, the shifter fork being secured thereto,

(See next page)

PMT/B 19-2 (Continued)
a pair of friction disc clutches coaxially mounted about the output shaft,
a clutch lever displaceably mounted on said gear shifting shaft for alternatively effecting engagement of said disc clutches,
means for actuating one of the intermeshing gear means by each of said disc clutches when each clutch is separately engaged by said clutch lever to synchronize the gear shifting operation,
a synchronizing piston displaceably mounted on said gear shifting shaft in the synchronizing cylinder for actuating said clutch lever,
at least one piston mounted on said gear shifting shaft in the gear change cylinder,
fluid pressure means for displacing said synchronizing piston and subsequently displacing said at least one piston in said gear change cylinder, said gear shifting shaft and the shifter fork secured thereto, and
means for inactivating the fluid pressure means for said synchronizing piston when said gear shifting shaft has been displaced.

PMT/B 19-3 (EE) Voltage sustainer for malfunctioning power supplies (U.S.P. 3,492,561)

1. In an alternating-current power supply having an output circuit and a field-winding circuit energized by the output circuit, the combination of:

(a) a substitute direct-current sustaining circuit adapted to energize said field winding and including
a silicon-controlled rectifier having
normally inactive current conducting means and a gate serving as inactive triggering means,
said current conducting means being conducted in said sustaining circuit and holding said sustaining circuit open when the output voltage is normal and energized from
a resistor connected in the sustaining circuit,

(b) a normally inactive triggering circuit responsive to the voltage of the output circuit and including
a transistor connected to the gate of said silicon controlled rectifier, said transistor, when operated shunts said resistor and produces a voltage at the gate of said silicon controlled rectifier when the output voltage of said power supply becomes normal,

(c) a second silicon controlled rectifier serving to turn off said first silicon controlled rectifier and actuated by voltage pulses from
a capacitor charged by the current from said alternating-current supply and
the gate of said second named silicon controlled rectifier is closed by square-wave pulses generated by a pulsing circuit and shunting a resistor furnishing voltage to the second named silicon controlled rectifier.

PMT/B 19-4 (EE) Warning lamp circuits for use in battery charging systems (U.S.P. 3,492,559)

1. A warning lamp circuit for use in a battery charging system, comprising means operable in use to illuminate a warning lamp until a generator in the battery charging system produces an output, and further means for illuminating the same warning lamp whenever the output voltage of the generator is above a predetermined value, said circuit including a capacitor, a switch through which the capacitor is charged when the switch is closed, and a transistor having its base-emitter circuit connected across the capacitor in series with a diode so that the transistor conducts when the capacitor is charged, the transistor when conductive illuminating the warning lamp, and means being provided for maintaining the capacitor sufficiently discharged when the generator is producing an output to turn the warning lamp off.

2. A circuit as claimed in claim 1 in which said further means comprises a voltage sensitive device which when the output voltage of said generator is above said predetermined value conducts to provide base current to the transistor irrespective of the state of charge of the capacitor.

PMT/B 19-5 (CS) Process for polymerizing styrene (U.S.P. 3,222,341)

A mass polymerization process which comprises (1) forming a reaction mixture by dissolving in 100 parts by weight of styrene a monomer-soluble mixture of (a) 0.001-0.5 part by weight of an organic hydroperoxide having a half-life of at least 10 hours in benzene at 100° C., (b) 0.01 0.1 part by weight of a peroxy compound having a half-life of at least 10 hours in benzene at 100° C. and corresponding to the formula ROOR', wherein both R and R' represent organic radicals, and (c) at least 0.05 part by weight of a monocarboxyhydrocarbon of the group consisting of acetic acid, hexanoic acid, benzoic acid, phenylacetic acid, isopropylbenzoic acid, hexahydrobenzoic acid, and an alkanoic acid containing 12-20 carbon atoms (2) heating the reaction mixture at 75-125° C. until 15-45% conversion to polymer is obtained, the temperature being so regulated as to be in the 75-95° C. range at the time that this conversion is obtained, (3) gradually raising the reaction temperature to 180-200° C. over a period of about 3-7 hours, and (4) maintaining the reaction temperature at 180-200° C. for about 0.5-5 hours.

REFERENCE TEXTS

産業技術翻訳技能教育審議会
通信教育指導委員会

日本文「特許明細」における英訳の一例であります。産業技術翻訳技能教育審議会は、「標準訳文」または「標準翻訳」など、「標準」という語を使用することを禁止しておりますので、通信教育指導委員会は、同審議会の意向を汲んで、単に REFERENCE TEXT(S) としました。ここに掲げられている英文は、優れた翻訳の一例でありますから、受講者自身が行なった翻訳と照合して研究するために使用されることを望みます。

PMT/B 20 Proper Usage of Words (2) "Consisting of"

PMT/B 20-1 Retainer clip (U.S.P. 3,494,583)

1. A combination comprising:
an elongated element such as a rod;
an integral retainer mounted for slidable movement and for non-slidable movement on the element, said retainer being formed from an elongated strip of flexible and resilient material, said strip being folded into sections providing a first end section 24, a second end section 26 and a third section 28 interconnecting the end sections, said second mentioned end section being interposed between the third mentioned section 28 and the first mentioned end section, said second mentioned end section and the third mentioned section having holes and being movable under compression toward one another to a position in which the holes are axially alignable for receiving the element and are resiliently urged away from one another into binding relationship between the walls forming the holes and the element, the first mentioned end section 24 being disposed with respect to the said second mentioned end section and the third mentioned section 28 for increasing the binding relationship between said walls when pressure is applied on the first mentioned end section in a direction toward the third mentioned section.

2. A combination as defined in claim 1, characterized in that the first mentioned end section is provided with a hole for receiving the rod.

PMT/B 20-2 Transmission ratio control mechanism for a tractor driveline (U.S.P. 3,491,862)

A manually controlled power transmission mechanism adapted to deliver driving torque from a driving member to a driven member comprising first torque delivery gears situated for rotation about a first axis, second torque delivery gears situated for rotation about an axis parallel to the axis of said first gears, said first gears being situated in meshing engagement with said second gears, one of said first gears being connected in the driving member, clutch means including axially movable clutch elements for completing a driving connection between selected gears and said driven member, a shift rail extending in a direction parallel to the axis of said first gears, shift forks slidably supported on the shift rail and engageable with said clutch elements, a rotatable cam plate mounted for rotation adjacent to said shift rail, said plate having cam grooves formed on one side thereof, said shift forks having cam followers carried thereon and received within said cam grooves, a detent mechanism comprising a cam detent groove formed in said cam plate, a cam follower in said detent groove, said detent groove being formed with detent locations that establish predetermined angular positions for said cam plate corresponding to each of the several operating positions for said shift forks, said cam grooves having predetermined configurations whereby rotary displacement of said cam plate will effect sequential shifting movement of said shift forks so that a single shift fork will be engaged at any angular position of said cam plate that corresponds to a position determined by said detent mechanism.

PMT/B 20-3 Fail-safe voltage-to-current translating circuit (U.S.P. 3,495,092)

1. For use in a rapid transit control system including a source of tractive effort voltage signals and a propulsion system, a fail-safe circuit for translating the tractive effort voltage signals to current signals, comprising, in combination:
(a) a closed loop control circuit including a current amplifier for providing the current signals,. said current amplifier having a low impedance feedback resistance connected in its output circuit, said closed loop control circuit adapted to be connected between the tractive effort signal source and propulsion system;
(b) summing amplifier means including a summing junction and summing impedance means;
(c) first means responsive to a preselected output of said summing amplifier to prevent current flow from said closed loop circuit to the propulsion system; and
(d) second means adapted to connect the source of tractive effort signals to said summing junction, and third means for connecting said summing impedance between said feedback resistor and said summing junction to cause said summing amplifier to respond to predetermined changes in the current signals which occur without corresponding changes in the tractive effort signals.

2. A circuit according to claim 1 wherein said first means includes switch means connected to the output of said current amplifier means and adapted to be connected to the propulsion system.

PMT/B 20-4 Polar leg adapter circuit (U.S.P. 3,495,099)

1. A polar leg adapter circuit for converting low voltage marking and spacing signals to high voltage marking and spacing signals respectively, comprising,
a pair of input terminals for applying said low voltage signals thereto;
negative and positive high voltage direct current sources;
a first transistor connected between the input terminals and the positive high voltage source so that said transistor is rendered nonconductive when negative low voltage marking signals are applied to the input terminals;
a pair of line load output terminals;
a second transistor connected in series with a resistor, a high threshold voltage Zener diode, said line load output terminals and said negative high voltage source, whereby said second transistor is rendered conductive when the first transistor is rendered nonconductive so that negative high voltage marking signals are applied to the line load output terminals via said Zener diode when negative low voltage marking signals are applied to the input terminals;
third and fourth transistors connected between the positive high voltage source and said output terminals;
and means rendering the third and fourth transistors nonconductive to isolate said positive high voltage source from the output terminals when said low voltage negative signals are applied to the output terminals.

PMT/B 20-5 Refractory alloy (U.S.P. 3,329,498)
A high temperature resistant alloy, said alloy consisting of 21% to 35% aluminum, an amount not exceeding 4% of a substance selected from the group consisting of copper and at least one metal selected from the group consisting of tungsten, molybdenum, vanadium and chromium, the balance being at least one metal selected from the group consisting of nickel and cobalt, wherein
(a) in the absence of copper, at least one metal selected from the group consisting of tungsten, molybdenum, vanadium and chromium is present in an amount of at least 2%,
(b) in the absence of nickel and of metals selected from the group consisting of tungsten, molybdenum, vanadium and chromium, said copper is present in an amount of at least 2%,
(c) in the presence of nickel, at least one of said metals selected from the group consisting of tungsten, molybdenum, vanadium and chromium is present in an amount of at least 2%, and
(d) in the simultaneous presence of copper and at least one metal selected from the group consisting of tungsten, molybdenum, vanadium and chromium, said copper and at least one metal selected from the group consisting of tungsten, molybdenum, vanadium and chromium are each present in an amount of at least 2%.

REFERENCE TEXTS

産業技術翻訳技能教育委員会
通信教育指導委員会

日本文「練習問題」に対する英訳の一例であります。産業技術翻訳技能教育委員会は、「標準訳文」または「標準翻訳」という、「答」という語を使用することを禁じておりますので、通信教育指導委員会は、同委員会の意向を汲んで、単に REFERENCE TEXT としました。ここに掲げられている英文は、優れた翻訳の一例でありますから、受講者自身が行なった翻訳と照合して検討するために使用されることを望みます。

PMT/B 21 Proper Antecedents - Mechanical Claims

PMT/B 21-1 Upending Conveyor (U.S.P. 3,491,868)

1. An upending conveyor comprising in combination:
a support frame;
a conveyor line mounted on said support frame;
a support means mounted adjacent one end of said conveyor line;
a cradle having a skewed shaft, said skewed shaft rotatably supported by said support means, said cradle adapted to rotate about said skewed shaft when its center of gravity is offset by the weight of a barrel received from said conveyor line, the rotation of said cradle causing the barrel to be rotated from a prone to an upright position;
a roller gate pivotally secured to said support frame adjacent said cradle, said roller gate adapted to receive the upended barrel from said cradle, the weight of the upended barrel causing said roller gate to pivot downwardly; and
a roller conveyor adjacent said roller gate, said roller conveyor adapted to receive the barrel from said roller gate subsequent to the downward pivotal movement of said gate.

2. An upending conveyor in accordance with claim 1 further comprising;
a push rod; and
means interconnecting said push rod and said roller gate whereby said push rod can push a barrel off a roller gate of an adjacent upending conveyor when said interconnected roller gate is pivoted downwardly.

PMT/B 21-2 Two-Handed Safety Control (U.S.P. 3,491,867)

1. A two-handed safety control device comprising a housing, a control member mounted for rotational movement within the housing, two axially-aligned, end-abutting shafts extending from said housing and rotatable about their aligned longitudinal axes independently of each other, the longitudinal axes of said shafts establishing the rotational axis of said control member, two shaft-supported members each rigidly supported on one of said shafts and each rotatable within the housing upon rotation of its respective shaft, said members being disposed adjacent to and on opposite sides of said control member, a shiftable element freely carried by said control member and extending beyond opposite side surfaces thereof, said shaft-supported members each having a cavity formed in its surface accomodating the extending portions of said shiftable element, said cavities having a depth sufficient to permit one of said shaft-supported members to be rotated past said control member upon rotation of its shaft while the other shaft is stationary, said shaft-supported members engaging the extending portions of said shiftable element and rotationally moving said control member when said shafts are moved in unison.

PMT/B 21-3 Disengageable Clutch Disc Coupling (U.S.P. 3,491,864)

In an automotive vehicle driveline having an engine crankshaft and a multiple ratio power transmission mechanism, said transmission mechanism comprising a power input shaft forming a part of a torque delivery shaft

(to be cont'd.)

from said engine crankshaft to driven portions of said driveline, a neutral clutch structure for connecting and disconnecting said crankshaft and said power input shaft including a first clutch element connected drivably to said crankshaft, a friction disc adapted for rotation about the axis of said power input shaft, a clutch hub carrying said friction disc, a pressure plate situated adjacent said friction disc, means for applying a clutch engaging force to said pressure plate to cause said friction disc to become frictionally engaged with said engine driven clutch element, releasable clutch means for connecting said friction disc hub and said power input shaft to accomodate torque delivery between said engine and said power input shaft, said releasable clutch means including driving and driven elements with portions thereof situated in torque transmitting relationship, said driving and driven elements being connected respectively to said hub and to said input shaft, torque transmitting clutch elements between said hub and said input shaft, and personally operable means for shifting said clutch elements out of torque transmitting relationship with respect to said driving and driven elements to disestablish the driving connection between said friction disc and said power input shaft.

PMT/B 21-4 Timing Device (U.S.P. 3,158,987)
In a timing device, driving and driven shafts independently rotatable about a common axis, a time indicating pointer secured to the driven shaft for rotation therewith, clutch means including a pair of clutching parts each carried by a separate one of said shafts, means mounting said driven shaft for displacement along its axis relative to the driving shaft to move the clutching part carried thereby into and out of clutching engagement with the clutching part carried by the driving shaft, clutch actuating means including a member movable in a plane substantially transverse to said common axis to effect displacement of said driven shaft along its axis of rotation, and cam means secured to said driven shaft, said member being movable into and out of engagement with said cam means after effecting displacement of said driven shaft, said cam means having a single stable position of engagement with said member corresponding to a preselected position of the pointer, and a solenoid effective when energized to move said member into engagement with said cam means subsequent to movement of the driven shaft clutching part out of clutching engagement with the driving shaft clutching part and effective when de-energized to allow said member to move out of engagement with said cam means.

PMT/B 21-5 Packaging Machine (U.S.P. 3,158,973)
A packaging machine for automatically wrapping articles in a film of material of the type which is fusible under pressure in the presence of heat comprising: a first conveyor for conveying said articles along a predetermined path, said conveyor having an entrance end and an exit end in that order along said path, a second conveyor having an entrance end adjacent to but spaced from said exit end of said first conveyor to transport said articles along an extension of said path, said conveyors adapted to be driven at equal speeds, a wrapping unit including

(to be cont'd.)

a plurality of rolls of thermoplastic film, said rolls being arranged above and below said conveyors, said films being fused together between said spaced conveyors to form a sheet extending transverse to said path through the space between said exit end of said first conveyor and said entrance end of said second conveyor whereby the article to be wrapped strikes said sheet at said exit end of said first conveyor and pulls off the necessary length of material required to wrap it, a control means activated by the conveyance of the article for stopping the movement of the conveyors when the article is placed in wrapping position, a wrapper fastener means actuated by said control means when the article is placed in wrapping position, said wrapper fastener means comprising a platen and a pressure bar each having a cross bar, said pressure bar being movable vertically into and out of pressure applying contact with the platen, said cross bars being bifurcated, a knife blade retained between the bifurcated portions of the pressure bar cross bar, said control means being actuated by the conveyance of the article to bring the pressure bar and platen together at intermittent periods for fusing the thermoplastic webs from the plurality of rolls together at spaced regions, said knife being adapted to extend outwardly from the surface of the pressure bar and between the bifurcated portions of the platen to out the web between said spaced regions.

REFERENCE TEXTS

PMT/B 22 Old Compounds - New Uses - Chemical Claims

PMT/B 22-1 Controlling fungi and bacteria with alkoxy or alkylthio alkylamine ethers (U.S.P. 3,291,683)

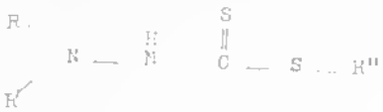
A method for controlling fungi and bacteria in an area and on organic products subject to infestation and attack therefrom, comprising: applying to the area to be protected from fungal and bacterial attack, a fungicidal-bactericidal effective amount of a compound selected from the group consisting of an amine having the formula:

$$R\text{--}X\text{--}R_1\text{--}NH_2$$

and the acid addition salt thereof, wherein R is an aliphatic hydrocarbon of from 6 to 18 carbon atoms, X is selected from the group consisting of sulfur and oxygen, and R_1 is a lower alkyl radical of from 2 to 4 carbon atoms.

Destroying undesired vegetation with alkyl and benzyl carbazates

The method of destroying undesired vegetation which comprises applying thereto a phytotoxic amount of a composition containing as an essential active ingredient a compound of the structure



where R is selected from a group consisting of hydrogen, lower alkyl and hydroxy lower alkyl and R' is selected from a group consisting of hydrogen and lower alkyl both R and R' being hydrogen when R" is a hydrocarbon radical and R" is selected from a group consisting of lower alkyl, benzyl.

PMT/B 22-2 Molding composition containing iron oxide and starch (U.S.P. 3,230,674)

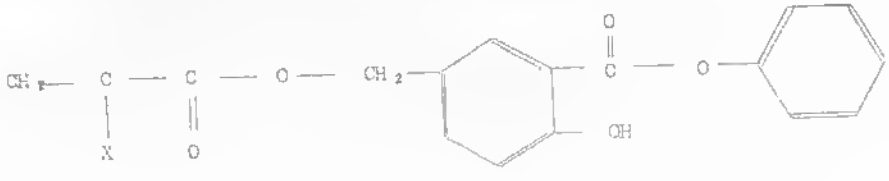
A well-mixed molding composition comprising a major proportion of sand, an effective minor proportion of water, said effective minor proportion being no less than about 1% water and no greater than about 5% water, based on the weight of said composition and an effective minor proportion of a foundry binder, said foundry binder comprising a mixture of small particles of iron oxide and starch in intimate contact, in

(See next page)

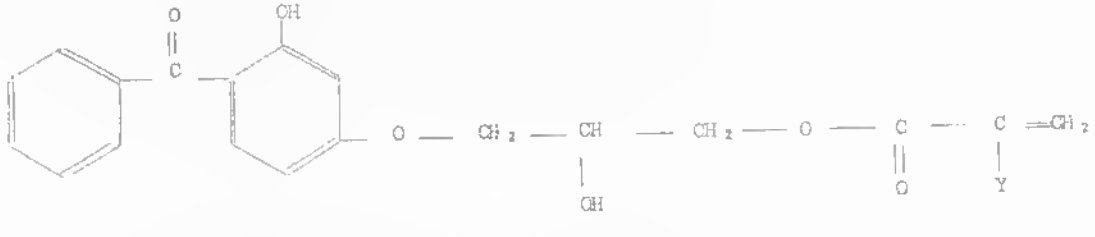
PMT/B 22-2 (Continued)
which said iron oxide and said starch are each present in substantially equal proportions based on weight, and in which said iron oxide is present in an effective quantity, no less than about 1½%, based on total weight of the composition, said sand being present in quantity of at least about 90% by weight and said foundry binder being present in quantity of between about 2½% by weight and about 9% by weight, said molding composition further comprising a minor proportion of a member selected from the group consisting of ammonium halides, alkali metal halides, and alkaline earth metal halides.

PMT/B 22-3 UV light absorbing copolymers of acryloxymethyl benzoates and dihydroxybenzophenone derivatives (U.S.P. 3,328,491)

A novel polymeric light absorber comprising a copolymer of: (A) at least one monomer corresponding to the formula:



wherein X represents a radical selected from the group consisting of hydrogen and methyl radicals; and, (B) at least one monomer corresponding to the formula:



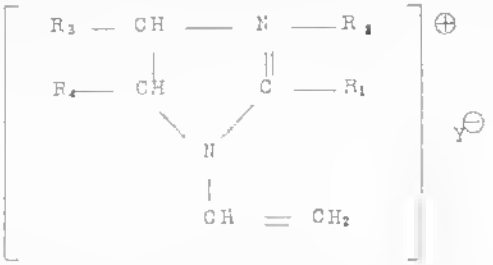
wherein Y represents a radical selected from the group consisting of hydrogen and methyl radicals.

PMT/B 22-4 Binding agent for refractories and its manufacture (U.S.P. 3,329,516)

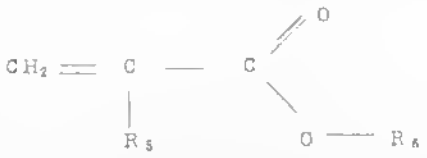
A stable, highly viscous binding agent for refractory materials possessing film-forming properties consisting essentially of the product made by dissolving in a solution of a monophosphate of a metal selected from the group consisting of Al, Fe, Zn and Mg, at temperatures of about 100° C. a hexavalent chromium oxide (CrO_3), reducing at least the major part of said CrO_3 to trivalent chromium oxide (Cr_2O_3) with the help of a reducing substance selected from the group consisting of an industrial sugar, molasses and sawdust under controlled temperature conditions to prevent the reduction of said CrO_3 to Cr_2O_3 by said reducing substance from becoming violent, the molar ratio of said metal to said Cr_2O_3 being between 1 to 0.1 and 1 to 1.

PMT/B 22-5 Quaternary vinylimidazolinium copolymer dispersions, methods of application of same to paper and sized paper thereof (U.S.P. 3,329,560)

A sized paper containing a copolymer of (a) 4 to 40% by weight of an N-vinylimidazolinium salt of the general formula



where R_1 is a member selected from the class consisting of methyl, ethyl, propyl, isopropyl, benzyl, methylol and phenyl group, R_2 is a member selected from the class consisting of methyl, ethyl, benzyl and hydroxyethyl group, R_3 and R_4 are members selected from the class consisting of hydrogen and methyl and ethyl groups, and $Y\ominus$ is an anion selected from the group consisting of chlorine, bromine, methyl sulfate and ethyl sulfate (b) at least 20% by weight of an ester of the general formula



where R_5 is a member selected from the class consisting of hydrogen and alkyl group containing from 1 to 4 carbon atoms and R_6 is an alkyl group containing from 2 to 8 carbon atoms; and (c) not more than 76% by weight of acrylonitrile; and (d) not more than 50% by weight of comonomers selected from the class consisting of styrene, low molecular weight vinyl esters of up to 3 carbon atoms, acrylic esters,

(See next page)

PMT/B 22-5 (Continued)
methacrylic esters, maleic esters, vinyl chloride, vinylidene chloride, acrylic amides, methacrylic amides and N-vinyllactams with from 5 to 7 ring atoms.

REFERENCE TEXTS

(RVD-4903-200)

産業技術翻訳技能教育審議会
通信教育指導委員会

日本文「練習課題」に対する英訳の一例であります。産業技術翻訳技能教育審議会は、「標準答案」または「標準翻訳」など、「標準」という語を使用することを禁じておりますので、通信教育指導委員会は、同審議会の意向を汲んで、単に REFERENCE TEXT(S) としました。ここに掲げられている英文は、優れた翻訳の一例でありますから、受講者自身が行なった翻訳と照合して研究するために使用されることを望みます。

PMT/B 23 Questionable Limitation - Mechanical Claims

PMT/B 23-1 Automatic Hydraulic Transmission (U.S.P. 3,153,909)

A hydraulic transmission comprising,
a pump housing having a pump shaft rotatably mounted therein and connectable to a drive shaft,
a crank rotatably mounted on said pump shaft in variable eccentric relation thereto, a variable stroke pump element mounted in said pump housing and arranged to be variably driven by said crank,
a control pin connected to said crank,
an annular control plate mounted for rotation relative to said pump shaft and drivingly connected to said control pin,
a guide plate connected to said pump shaft for rotation therewith,
centrifugal weights radially slidably mounted on said guide plate and rotatable therewith,
means connecting said weights to said control plate to rotatably displace said control plate relative to said pump shaft upon radial outward motion of said weights,
spring means resisting displacing motion of said control plate,
said spring means being calibrated relative to said weights to prevent displacement of said control plate below a predetermined minimum speed of said pump shaft and permitting maximum displacement of the control plate at an intermediate speed of the pump shaft over said minimum speed,
said crank being arranged for minimum eccentricity of said crank relative to said pump shaft in the retracted position of said control plate and said weights, and means forming a working liquid circulating system cooperative with said pump element,
said system being connectable to a working element to be driven by liquid circulated in the system.

PMT/B 23-2 Ball-and-Socket Joints (U.S.P. 3,154,333)

A ball and socket joint comprising a cylindrical housing forming a socket, a ball pin with a spherical head disposed in said socket, a first synthetic plastic ring shaped bearing member disposed in said socket between said head and the inner surface of said housing, a second ring shaped bearing member disposed in said socket between said head and said inner surface, said second ring member consisting of a resilient pad of compressed woven textile material impregnated with a lubricant, said ring members having substantially flat parallel facing surfaces in contact with each other, an internal shoulder adjacent one end of said socket and a closure cap adjacent the other end of the socket retaining said ring members in contact with each other and with said head, said plastic ring member having circumferentially spaced protuberances on its face in contact with said pad ring member, said protuberances extending into and embedded below the surface of said abutting surface of said pad ring member to restrain said first ring member from rotation with respect to said second ring member.

(to be cont'd.)

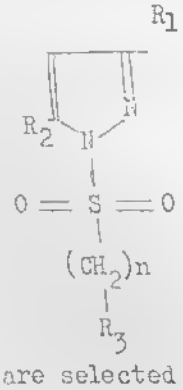
REFERENCE TEXTS

PMT/B 24 Method Claims - Chemical Claims

PMT/B 24-1

(I) Controlling Blood Sugar with Sulfonyl Pyrazoles (U.S.P. 3,294,640)

A method of controlling the level of sugar in blood which comprises administering to an animal from about 10 mg. to about 750 mg. per day of a compound represented by the formula:



wherein R_1 and R_2 are selected from the group consisting of hydrogen, methyl, methoxymethyl;

R_3 is selected from the group consisting of hydrogen, lower alkyl, naphthyl, dimethylamino;

n has a value of from 0 to 2 inclusive with the proviso than n has a value of at least 1 when R_3 is hydrogen.

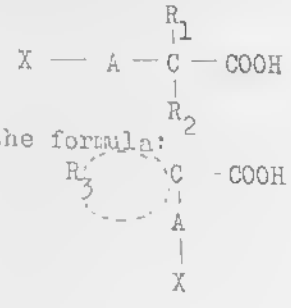
(II) Oral Iron-Glucosamine Hematinic Composition and Therapy (U.S.P. 3,102,844)

A method for administering soluble iron which method comprises orally administering to a host a soluble iron material concurrently with a compound selected from the group consisting of glucosamine and a glucosamine salt, said compound providing enhanced absorption of iron and being present in a ratio of from about 10 milligrams to about 2000 milligrams per millgram of soluble iron material.

PMT/B 24-2

(I) Methods for Reducing Cholesterol in the Blood (U.S.P. 3,262,850)

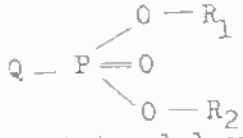
A method of reducing the cholesterol content of blood which comprises orally administering to a patient an effective dose of at least one compound selected from the group consisting of compounds having the formula:



and compounds of the formula:

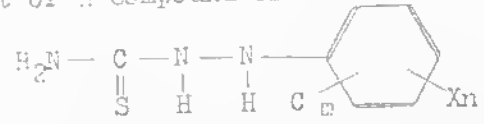
(to be cont'd.)

PWT/B 24-2(cont'd.)
wherein A is selected from the group consisting of oxygen and imino; R_1 is lower alkyl; R_2 is selected from the group consisting of hydrogen and lower alkyl; R_3 represents the methylene groups necessary to form, together with the adjacent carbon atom, a cyclohexyl ring; and X is selected from the group consisting of phenyl, halogenophenyl, alkylphenyl, alkenylphenyl, and alkoxyphenyl.
(II) Insecticidal Triazolyl Phosphorus Compounds (U.S.P. 3,230,139)
A method of destroying insects comprising contacting said insects with an insecticidal composition containing an insecticidally effective amount of a triazolyl phosphorus compound of the formula



wherein Q is 3-amino-1, 4-triazolyl substituted in the 5 position only with up to one alkyl of 1 to 7 carbon atoms, the phosphorus is directly attached to a ring nitrogen and R_1 and R_2 are each alkyl of 2-5 carbon atoms.

PWT/B 24-3
(I) Control of Fungi on Plants with 1-Phenylthiosemicarbazides (U.S.P. 3,262,845)
A method of combating fungi on living plants and seeds comprising contacting the fungi thereon with a fungicidally effective but a non-phytotoxic amount of a compound of the formula:

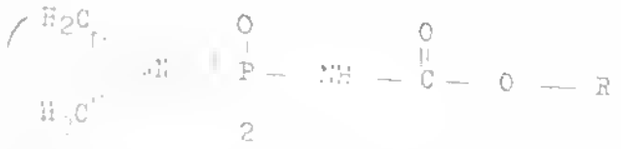


wherein X is a member of the group consisting of alkyl of 1 to 4 carbon atoms, alkoxy of 1 to 4 carbon atoms and mercapto alkyl of 1 to 4 carbon atoms, m is an integer from 0 to 1 inclusive and n is an integer from 0 to 3 inclusive.
(II) 4-Halo-1-Methoxynaphthalenes as Soil Fungicides (U.S.P. 3,266,983)
Method for protecting plants from attack by soil fungi comprising applying to soil infected with soil fungi a plant protectant amount of a compound selected from the group consisting of
4-fluoro-1-methoxynaphthalene, and
4-chloro-1-methoxynaphthalene, and
4-bromo-1-methoxynaphthalene.

PWT/B 24-4
(I) Sterilizing Insects with Bis-(Ethylenimido)Phosphoro Carbamates (U.S.P. 3,264,178)
1. The method of treating an insect to render it substantially incapable of reproduction comprising administering to said insect a compound having the formula

(to be cont'd.)

PMT/B 24-4 (cont'd.)

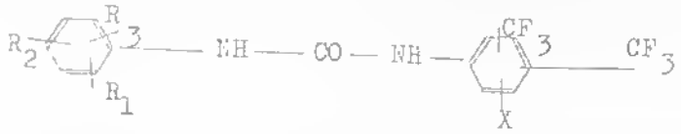


wherein R is selected from the group consisting of methyl, ethyl, benzyl and nitrobenzyl.

(I) A composition of matter for rendering an insect incapable of effective reproduction comprising a nonsterilizing insect food and at least 0.05%, up to about 2.5%, by weight, of at least one compound selected from the group consisting of ethyl bis(ethylenimido) phosphoro carbamate, methyl bis(ethylenimido)phosphoro carbamate, and benzyl bis(ethylenimido)-phosphoro carbamate.

(II) Method for Protecting Fibers Against Attack by Insects and Bacteria with Biphenyl Urea Compositions (U.S.P. 3,230,141)

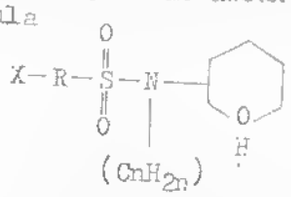
A process for the protection of keratin material from injurious insects which comprises applying to the keratin fibres and to textiles containing keratin, an insecticidal effective amount of a composition containing as the essential active ingredient, a compound of the formula.



PMT/B 24-5

(I) Sulfonamide Fungicides (U.S.P. 3,256,148)

The method of controlling fungal growth which comprises contacting said fungus with a fungicidal amount of a N-(2-tetrahydropyranyl) sulfonamide of the formula



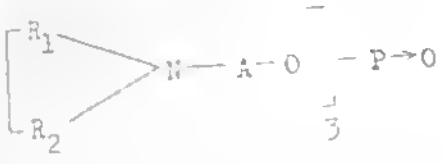
wherein n is an integer of from 0 to 5; R is an aromatic hydrocarbon containing up to and including 12 carbon atoms and free of aliphatic unsaturation, and X is a member of the group consisting of hydrogen, chloro, bromo, nitro, amino and lower alkoxy.

(II) Method of Treating Plants (U.S.P. 3,253,905)

The method of controlling the flowering of plants which comprises applying to the foliage of said plants in an amount sufficient to control flowering a member selected from the group consisting of a tri-(aminoalkyl)-phosphate and its nontoxic acid addition salts, said phosphate being of the formula:

(to be cont'd.)

PMT/B 24-5(cont'd.)



in which:
R_1 and R_2 are members selected from the group consisting of lower alkyl of from 1 to 8 carbon atoms and, when taken together, pyrrolidinyl, piperidinyl, morpholinyl, thiomorpholinyl and N-methylpiperazinyl; and A is an alkylene chain of from 2 to 6 carbon atoms.

REFERENCE TEXTS

産業技術翻訳技能教育委員会
通信教育指導委員会

PMT/B Correlation of Composition with Properties

PMT/B 25-1 Pyrophosphate Copper Strike Zincating Solution (U.S.P. 3,329,522)

A zincating bath for aluminum metals comprising a dilute aqueous solution of a zinc salt having a total salt concentration of no more than about 180 grams per liter, an alkaline compound, a chelating agent capable of chelating both aluminum and zinc comprising the combination of (1) from about 5 to 95 percent of a water soluble chelating agent having a log k_1 zinc stability constant of about 4.5 to 18 and (2) from about 95 to 5 percent of a water soluble chelating agent having a log k_1 zinc stability constant of about 1.5 to 4 and a small amount sufficient to passivate the zinc immersion deposit sufficiently to prevent an immersion copper deposit from forming thereon in a subsequent pyrophosphate copper strike solution, of a copper salt.

PMT/B 25-2

(I) Mixture of Postchlorinated Atactic and Eutactic Polyvinylchlorides (U.S.P. 3,328,490)

A composition of matter comprising about 20 to about 90% postchlorinated atactic polyvinylchloride having a chlorine content of between about 58 and about 68% and about 80 to about 10% postchlorinated eutactic polyvinylchloride having a chlorine content of between about 58 and about 68%.

(II) Refractory Binder Comprising Organic Silicates (U.S.P. 3,329,520)

A liquid composition suitable for use as a binder for refractory powder when diluted with water which consists essentially of a mixture of:

(a) an alkyl silicate having up to 4 carbon atoms in each alkyl group, and

(b) an aminoalkyl orthosilicate which is capable of forming a gel, when mixed with water,

the amount of said aminoalkyl orthosilicate ranging between 1% and 20% by volume of the mixture.

PMT/B 25-3 Protein Glue for Southern Pine Plywood (U.S.P. 3,329,518)

Southern pine plywoods produced by hot pressing layers of southern pine veneer, each layer having been coated prior to the hot pressing step with a thermally crosslinkable glue comprising an aqueous dispersion having a pH of 9-9.2 and containing per 100 parts by weight thereof(a) 7.4 parts of soy flour, (b) 7.4 parts of spray-dried blood, (c) about 3.3 parts of sodium silicate, (d) about 1.5 parts of borax, (e) about 0.7 part of sodium pentachlorophenate, and based on the combined weight of (a) and (b) about 0.7 part by weight of borax-dispersed periodate-oxidized dialdehyde starch, said plywoods being characterized by high resistance to moisture-induced delamination.

PMT/B 25-4 Method of Applying an Improved Match Striking Surface (U.S.P. 3,329,521)

The method of applying a match striking surface to a paperboard container stock whereby to provide such a surface upon a container for matches,

(to be cont'd.)

REFERENCE TEXTS

産業技術翻訳技能教育委員会
通信教育指導委員会

日本文「練習課題」に対する英訳の一例であります。産業技術翻訳技能教育委員会は、「標準答案」または「標準翻訳」など、「標準」という語を使用することを禁じておりますので、通信教育指導委員会は、同委員会の意向を汲んで、単にREFERENCE TEXT(S)としました。ここに掲げられている英文は、優れた翻訳の一例でありますから、受講者自身が行なった翻訳と照合して研究するために使用されることを望みます。

PMT/B 26 Claiming Absence of Structure --- Mechanical

PMT/B 26-1 Locks (U.S.P. 3,505,840)

1. A lock comprising in combination, a male element arranged to be mounted on a first component, a female element arranged to be mounted on a second component which is to be releasably secured to said first component, said female element having an aperture configurated for entry of said male element and being angularly displaceable with with reference to the latter between a locking position, an intermediate position and a release position; and releasable first and second arresting means cooperating with said female element for preventing angular displacement of the same from said locking position, said first and second arresting means being sequentially operable for permitting succesive angular displacement of said female element to said intermediate position and to said release position respectively.

2. A lock as defined in claim 1, said first and second arresting means engaging said female element at angularly spaced locations of the latter.

3. A lock as defined in claim 1, said male component comprising an elongated helically twisted portion, and said aperture being configurated for permitting entry of said portion in a sense, effecting angular displacement of said female element from said release position to said locking position in automatic response to entry of said portion into said aperture.

PMT/B 26-2 Flexible Shaft Coupler (U.S.P. 3,505,831)

1. A coupler for connecting two flexible shafts of the type having an outer casing containing a flexible driving shaft therein, said coupler comprising, an elongated cylindrical housing having opposite ends thereof adapted for connection respectively with ends of the outer casings of a pair of flexible shafts, which housing has a longitudinally extending, through bore, an elongated cylindrical coupling member having its opposite ends adapted for restective driving engagement with the flexible driving shafts contained within said outer casings, respectively, said coupling member consisting of a pair of cylindrical elements detachably connected together at their adjacent ends, said coupling member being contained within said bore, the outside diameter of said coupling member being less than the diameter of said bore to an extent that the former is loosely received within the latter for free rotation therein and for lateral movement relative thereto, the engagement between the surface of said bore and outer surfaces of said coupling member serving as the sole means rotatably supporting the latter.

PMT/B 26-3 Self-Aligning Bearing (U.S.P. 3,505,891)

1. A self-aligning ball bearing for journally transmitting forces between a pair of bodies, said bearing comprising:
an inner member connected to one of said bodies and having an outer annular raceway formed therein;

PMT/B 26-3 (cont'd.)
a plurality of balls mounted in said raceway, said raceway being dimensioned to constrain said balls in circumferential alignment; and an outer member connected to the other of said bodies and having an inner annular surface aligned with said outer raceway for maintaining said balls in assembled relationship, said outer member including guide means of variable transverse curvature defined on said annular surface for constraining lateral movement of a ball thereon, and providing means for permitting lateral movement of balls on said surface circumferentially removed from said constrained ball whereby said bodies may be aligned by relative lateral movement of said circumferentially removed balls and said one body about said constrained ball.

2. The self-aligning bearing as recited in claim 1 wherein said guide means comprises an annular raceway having a minimum transverse curvature adjacent said constrained ball and a maximum transverse curvature diametrically opposite said minimum transverse curvature, and the variable transverse curvature tapering continuously from said minimum transverse curvature to said maximum transverse curvature.

PMT/B 26-4 Ball Joint (U.S.P. 3,506,290)

A ball joint in the form of an angular joint comprising:
(a) a joint case,
(b) a ball head universally movable in said case,
(c) a joint pin connected to said head,
(d) said case having a bellow packing integrally formed in an injection moulding process from polyurethane with an interlaced structure,
(e) a peripheral recess in said case,
(f) an injection moulded reinforcement ring in said recess and having a connection piece integrally formed therewith,
(g) said case having an opening and said bellow packing being connected to the outer edge of said opening,
(h) said case having a closed vaulted-out portion opposite said opening,
(i) said case having an interior surface receiving said ball head, said surface between said closed portion and the point of contact of said ball head within the zone of said peripheral ring being cylindrical in shape with a diameter less than that of said ball head.

2. A ball joint as defined in claim 1 wherein the axis of said reinforcement ring is transverse to the axis of said connection piece.

3. A ball joint as defined in claim 1 wherein said opening is funnel-shaped.

4. A ball joint as defined in claim 1 wherein said connection piece is in the form of an elongated internally threaded means.

PMT/B 26-5 Automatic Lubrication for Torque Limiting Devices (U.S.P. 3,505,833)

1. The combination of first and second members having coupling means including an overload device normally connecting them for rotation in unision, and having complementary bearing surfaces, the said bearing surfaces being relatively rotatable when a predetermined load is exceeded, means providing a lubricant storage channel between the respective bearing surfaces, and lubricant distributing means connected with one of said last mentioned members and disposed in the channel to move

PMT/B 26-5 (cont'd.)
circumferentially in the channel when there is relative movement between the said bearing surfaces, whereby to distribute stored lubricant from said channel around portions of the said bearing surfaces.

2. A combination according to claim 1 in which one of said members is provided with a fitting connected for lubricant delivery into said channel, the channel being largely in one of said members, said last means and said channel having complementary surfaces and said last means having means for maintaining said surfaces in substantial contact.

REFERENCE TEXTS

PMT/B 27 Functionality and the Point of Novelty

PMT/B 27-1 (ME) Flexibile Coupling Device (U.S.P. 3,505,832)

1. A coupling device for flexibly coupling together a first shaft and a second shaft, the device consisting of a first member adapted for connection to the first shaft; a second member adapted for connection to the second shaft, the first and second members being approximately coaxial; vanes on the surface of the first member that faces the second member; similar vanes on the surface of the second member that faces the first member, the vanes on the first member being interspaced between the vanes on the second member; and resiliently distortable elements between the vanes on the first member and the vanes on the second member and cooperating with the vanes to connect the members together axially and limit relative rotation thereof, said resiliently distortable elements being formed of laminations of a first, resilient, material and a second material that is less resilient than said first material, and being fast with the vanes on one of said members and engaged with the vanes on the other of said members so as to be able to move with respect to this other member to permit free lirited rotation or said members relative to each other.

2. A coupling device according to claim 1, wherein each resilient element has a part of dovetail form, and wherein parts of the vanes of one of said members define corresponding dovetails in which the parts of dovetail form of the resilient elements are fast.

PMT/B 27-2 (ME) Large Diameter Sprocket Wheel (U.S.P. 3,505,892)

1. A large diameter sprocket wheel comprising a base member, a circular web lying on said base member and extending radially outwardly from said base member substantial distance to establish the diameter of the sprocket wheel, a plurality of radial supporting arms for said web disposed at circumferentially spaced positions around the web, each said radial supporting arm extending substantially to the circumference of said circular web, each said radial supporting arm including a flat part that is placed in surface to surface abutment with said web and a leg that is upstanding from the flat part, means to unite each of said radial supporting arms with the web in a structural assembly, means extending through said base member, through said circular web and through the flat part of each of at least several of said radial supporting arms to secure the circular web and its radial supporting arms to the base member, circumferentially spaced sprocket teeth at the circumference of said web, and bearing means on said base member to rotatably support the sprocket wheel.

PMT/B 27-3 (EE) Selection Device (U.S.P. 3,506,853)

1. A current steering circuit comprising:
a series circuit including at least one diode;
reference potential means for driving a current through said series circuit;
first and second taps respectively connected to the anode and cathode of said diode;

PMT/B 27-3 (cont'd.)
first and second identical condution paths respectively connected to said first and second taps;
each of said first and second conduction paths including a selectively conductive switch; and
means establishing a potential across said diode insufficient to forward bias it when current is diverted from said series circuit into said first conduction path.
2. A current steering circuit comprising;
a series circuit including a plurality of similarly poled unidirectional current conducting elements, each coupled between a different pair of first and second terminals;
reference potential means for driving a current through said series circuit;
a plurality of substantially identical switching paths each coupled to a different one of said first terminals;
means causing selected ones of said switching paths to be conductive tending to divert current from said series circuit therethrough; and
means responsive to current diverted from said series circuit through one of said switching paths for establishing a potential at the first terminal coupled thereto insufficient to forward bias the unidirectional current conducting element coupled thereto.

PMT/B 27-4 (EE) Amplifier with Binary Output (U.S.P. 3,506,850)
1. An amplifier to produce a binary output current in a load in response to an input signal comprising:
a first transistor switch, having a base, emitter, and collector, and responsive to the input signal;
a first current supply;
a second current supply;
a second transistor switch having a base, emitter, and collector;
a selector switch having at least three positions, wherein the selector switch at a first setting thereof connects the first current supply in series with the load and the first transistor switch, at a second setting thereof connects the first and second current supplies in series with the load through the first and second transistor switches, so that the second transistor switch is open when the first transistor switch is closed and is closed when the first transistor switch is open, and at a third setting thereof connects the second current supply in series with the load through the second transistor switch, so that the second transistor switch is open when the first transistor switch is closed and is closed when the first transistor switch is open; and
the collector-emitter path of the first transistor switch is included in the circuit between the base and the emitter of the second transistor switch, and the load is connected in series with the collector-emitter path of the second transistor switch.

FMT/B 27-3 (cont'd.)
first and second identical condution paths respectively connected to said first and second taps;
each of said first and second conduction paths including a selectively conductive switch; and
means establishing a potential across said diode insufficient to forward bias it when current is diverted from said series circuit into said first conduction path.
2. A current steering circuit comprising;
a series circuit including a plurality of similarly poled unidirectional current conducting elements, each coupled between a different pair of first and second terminals;
reference potential means for driving a current through said series circuit;
a plurality of substantially identical switching paths each coupled to a different one of said first terminals;
means causing selected ones of said switching paths to be conductive tending to divert current from said series circuit therethrough; and
means responsive to current diverted from said series circuit through one of said switching paths for establishing a potential at the first terminal coupled thereto insufficient to forward bias the unidirectional current conducting element coupled thereto.

FMT/B 27-4 (BE) Amplifier with Binary Output (U.S.P. 3,506,850)
1. An amplifier to produce a binary output current in a load in response to an input signal comprising:
a first transistor switch, having a base, emitter, and collector, and responsive to the input signal;
a first current supply;
a second current supply;
a second transistor switch having a base, emitter, and collector;
a selector switch having at least three positions, wherein the selector switch at a first setting thereof connects the first current supply in series with the load and the first transistor switch, at a second setting thereof connects the first and second current supplies in series with the load through the first and second transistor switches, so that the second transistor switch is open when the first transistor switch is closed and is closed when the first transistor switch is open, and at a third setting thereof connects the second current supply in series with the load through the second transistor switch, so that the second transistor switch is open when the first transistor switch is closed and is closed when the first transistor switch is open; and
the collector-emitter path of the first transistor switch is included in the circuit between the base and the emitter of the second transistor switch, and the load is connected in series with the collector-emitter path of the second transistor switch.

PMT/B 27-5 (CS) Method of Preparing a Catalyst Composition Comprising Nickel, Iron and Copper and the Product Thereof (U.S.P. 3,206,414)

1. A catalyst for the oxidation of the combustible matters contained in the exhaust fumes of internal combustion bustion engines, consisting essentially of finely divided nickel particles and finely divided iron particles with their surfaces covered by a layer of copper oxide, said nickel particles and copper oxide covered iron particles being intermixed and sintered together.

2. The process of producing a catalyst for the oxidation of carbon monoxide gas, gaseous hydrocarbons, hydrogen gas, which comprises the intimate mixing of finely divided particles of iron with their surfaces covered by a layer of copper with finely divided nickel particles, sintering the mixture of particles by the application of heat in a non-oxidizing atmosphere, the temperature of the sintering mixture being kept over 600°C., oxidizing the sintered mixture by the application of heat in an oxidizing atmosphere and finally heating the oxidized and sintered particles to a temperature between 200°C. and 300°C. in an atmosphere of hydrogen.

REFERENCE TEXTS

産業技術翻訳技能教育審議会
通信教育指導委員会

日本文「模型特許」に対する英訳の一例であります。産業技術翻訳技能教育審議会は、「標準答案」または「模範翻訳」など、「標準」という語を使用することを禁じておりますので、通信教育指導委員会は、同審議会の意向を汲んで、単にREFERENCE TEXT(S)としました。ここに掲げられている英文は、優れた翻訳の一例でありますから、受講者自身が行なった翻訳と照合して研究するために使用されることを望みます。

PMT/B 28 Selection of Broad or Specific Claims.

PMT/B 28-1(ME) Clutch Structure with Segmented Clutch Plates (U.S.P. 3,491,865)

1. A multiple disc clutch assembly comprising a torque input clutch element, a torque output clutch element, internal splines formed on said input clutch element, external splines formed on said output clutch element, an annular clutch disc separator plate secured to said input clutch element, segmented clutch plates secured to said output clutch element, said clutch plates having an arcuate inner periphery formed with internal spline teeth, the external spline teeth of said output clutch element registering with the internal spline teeth of said clutch plates, said separator plate being adapted to register with a plurality of clutch plates, and servo means for applying clutch engaging pressure to said clutch assembly whereby said clutch disc separator plate frictionally engages said segmented clutch plates, said clutch plates being formed with external clutch teeth on the outer periphery thereof, friction material formed on the sides of said clutch plates, said external teeth being formed during formation of the clutch plates by a stamping die as it cuts the clutch plate material from a strip of steel plate stock, the radius of curvature of the outer periphery of each plate being equal to the radius of curvature of its inner periphery.

2. The combination as set forth in claim 1 wherein said clutch plates are three in number, each clutch plate extending through an arc of about 120° along the pitch circle for the teeth of said clutch hub.

PMT/B 28-2(ME) Method of Joining Metal Sheet and Strip (U.S.P.3,504,427)

1. The method of joining metal sheets or strips comprising the step of beveling opposite surfaces of the end portions of the strips to be joined while said end portions are separated, thereafter overlapping the beveled end portions so as to form void and applying compressive pressure thereto so as to fill the controlled void spaces between said beveled end portions by displaced metal.

2. The method recited in claim 1, wherein said compressive pressure is applied by planishing wheels.

3. The method recited in claim 1, wherein said compressive pressure is applied by means of welding wheels.

4. The method recited in claim 1, wherein said compressive pressure is applied by means of vibratory hammers.

5. The method recited in claim 1. together with the further step of loosening and removing detrimental oxide coatings and the like in the weld area during the beveling operation of said end portions.

PMT/B 28-2(MP) (Continued)

6. The method recited in claim 2, wherein said beveled plastching rollers are vibrated while beveling said end portions for accelerating loosening of said coatings.

7. The method recited in claim 6, wherein said loosened coatings are cleaned and removed while beveling said end portions.

PMT/B 28-3(EE) Power Control Circuit (U.S.P. 3,506,855)

1. A power control circuit comprising an electrical valve having current conductive electrodes and a control electrode, connections to the current conductive electrodes to impress a pulsating voltage thereacross, the valve becoming conductive when a predetermined voltage is applied to the control electrode and a voltage of predetermined value is impressed across the current conducting electrodes, a pulse circuit connected to the control electrode to supply actuating pulses thereto and including a second electrical valve having current conductive electrodes connected across a source of power and a control electrode connected to the source of the controlling signal, a third electrical valve having current conductive electrodes connected in series with the current conductive electrodes of the second valve and a control electrode connected through a capacitor to one of its current conductive electrodes, a fourth electrical valve controlled in response to the flow of current through the second and third electrical valves, a capacitor in series with the fourth electrical valve, and means responsive to the charge on the last named capacitor to control the supply of pulses to the control electrode of the first named electrical valve.

PMT/B 28-4(EE) Variable Speed Control Circuit for Single Phase Alternating Current Induction Type Motors (U.S.P. 3,461,37

1. A variable speed control circuit for single phase alternating current induction type motors comprising in combination with an alternating current motor, a diode, a transistor device having base, emitter and collector electrodes, means for connecting said diode in parallel with and poled oppositely in respect to said collector and emitter electrodes of said transistor device, a potential divider circuit including at least one potentiometer having a movalbe contact, a resistor, means for connecting said resistor in parallel with said collector and emitter electrodes, means for connecting said potential divider circuit in parallel with said collector and emitter electrodes, means for connecting said base electrode only to said movable contact of said potentiometer whereby the degree of conduction through said collector-emitter electrodes of said transistor is determined by the adjustment of said movable contact and means for connecting said motor in series with the parallel combination of said diode, collector-emitter electrodes and said resistor.

2. A variable speed control circuit as defined in claim 1 which further includes a potential regulator device connected across at least a portion of said voltage divider circuit for maintaining a substantially constant potential across that portion of said voltage divider network.

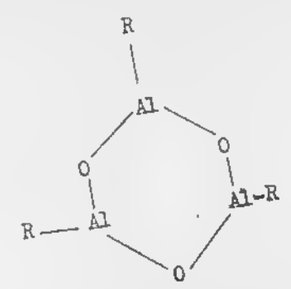
PMT/B 28-5 (CS)

(I) Process for Preparing Hydroxy Alkyl Acrylates and Methacrylates (U.S.P. 3,150,167)

The process for preparing hydoxy propyl methacrylate which comprises contacting propylene oxide with methacrylic acid at a temperature not exceeding 80°C., and in the presence of aluminum trichloride as catalyst.

(II) Color Stable Fuel Oil (U.S.P. 3,320,042)

Method for desulfurizing and increasing the color stability of sulfur-containing cracked gas oil boiling mainly within the range of 425°F. and 700°F. and containing at least 0.3% sulfur which comprises (1) contacting in liquid phase said gas oil with a sulfur-resistant hydrogenation catalyst, in an atmosphere of hydrogen at a temperature of from 500°F. to 650°F. and a pressure of from 300 p.s.i.g. to 1000 p.s.i.g., (2) recovering a substantially desulfurized cracked gas oil, and (3) adding to said desulfurized cracked gas oil a minor amount of a substituted cyclic aluminum oxide trimer of the formula



where "R" is selected from the group consisting of acylate anions of aliphatic monocarboxylic acids containing 12 to 22 carbon atoms per molecule and alkoxy anions of alcohols containing from 1 to 10 carbon atoms per molecule said minor proportion being an amount sufficient to inhibit color degradation of said petroleum fraction.

REFERENCE TEXTS

産業技術翻訳技能教育委員会
通信教育指導委員会

日本文「模範解答」に対する英訳の一例であります。産業技術翻訳技能教育委員会は、「標準答案」または「標準翻訳」など、「標準」という語を使用することを禁じておりますので、通信教育指導委員会は、同委員会の意向を汲んで、単に REFERENCE TEXT(S) としました。ここに掲げられている英文は、優れた翻訳の一例でありますから、受験者自身が行なった翻訳と照合して研究するために使用されることを望みます。

PMT/B 29-Hentification —— Electric Claims

PMT/B 29-1 Method of Making Semiconductor Devices Having Insulating Films (U.S.P. 3,504,430)

1. A method of making a semiconductor device having an insulating film, comprising the steps of:
(a) forming on a semiconductor substrate an insulating film having a thick part and a thin part;
(b) providing an etching resisting mask on the surface of said insulating film except on one portion of said thick part and at least one portion of said thin part;
(c) making at said portion in said thin part a hole reaching the semiconductor substrate and making said portion of said thick part thin by simultaneously exposing the portions of said insulating film not covered with said mask to an etchant; and
(d) forming conductive layers at least on a part of said thinned portion and on the semiconductor substrate in said hole.

2. A method according to claim 1, further comprising the step of forming a conductive layer on a part of said thick insulating film formerly covered with said mask.

PMT/B 29-2 Method of Manufacturing Insulated Electrical Members (U.S.P. 3,504,431)

1. The method of making an electrical coil comprising the steps of:
(a) forming an electrical coil of predetermined configuration having a plurality of turns of electrical conductor with each such turn electrically isolated from the other;
(b) charging a fluidized bed container with an electrically insulating epoxy resin coating composition including an epoxy resin film forming material and a hardener therefor;
(c) heating said coil to a temperature above the melting temperature of said epoxy resin compcsition;
(d) immersing said heated coil into said fluidized bed of epoxy resin coating composition;
(e) heating said coil after its removal from said fluidized bed for a time and at a temperature sufficient to provide at least a partial cure for the epoxy resin coating thereon;
(f) applying to said at least partially cured epoxy resin coating at least one layer of a liquid alkyl material modified by a butylated melamine formaldehyde resin; and
(g) heating said coil for a time and at a temperature sufficient to effect a cure of the coating material thereon.

PMT/B 29-3 Driver Circuit (U.S.P. 3,506,854)

1. Driver circuit for use in communication equipment, comprising: a first transistor having an emitter, a base and a collector, an electrical energy source including means providing first, second, third and

PMT/B 29-4 (cont'd.)
the series connection of the switching path of one transistor and the working resistance of both transistors and connected to the common connection between the emitter electrode of one transistor and the collector electrode of the other transistor whereby said connection of the diode to said common connection constitutes the output of the circuit device.

PMT/B 29-5 Electrical Control Apparatus (U.S.P. 3,470,436)
1. A speed control system for an AC motor, comprising:
a source of AC potential,
an AC motor having at least one winding,
a semiconductor AC switch having main electrodes and a control electrode, the main electrodes of said AC switch being connected in series with said source of AC potential and said at least one winding of the AC motor,
first means providing a unidirectional potential responsive to the speed of the AC motor,
second means comparing the unidirectional potential of said first means with a reference voltage to provide a speed control voltage,
third means providing a control voltage pulse of like magnitude and polarity during each half cycle of said source of AC potential, initiated when said AC switch switches to its nonconductive state, and terminated when said AC switch switches to its conductive state,
and phase controlled firing means connected to said second and third means providing firing signals for the control electrode of said AC switch during each voltage half cycle of said source of AC potential, with the firing point in each voltage half cycle being responsive to the speed control voltage, to operate said AC motor at selectable speed.

PMT/B 29-3 (cont'd)
fourth voltage levels and a reference voltage level, means connecting the emitter-collector path of said furst transistor between said first voltage level and said third voltage level, signal input means connected to the base of said first transistor and including a connection to said fourth voltage level and operative in response to signal reception to turn said first transistor on, signal output means connected to said reference voltage level, a second transistor having an emitter, a base and a collector, means connecting the collector-emitter path of said second transistor between said second voltage level and said output means, means connecting the collector of said first transistor and the base of said second transistor, means electrically connected in parallel to the base-emitter path of said second transistor including a diode poled to prevent current flow through said second transistor when said first transistor is on; said second and third voltage levels having opposite values relative to said reference voltage level, said first voltage level being higher than said second voltage level and being of the same polarity relative to said reference voltage level; said fourth voltage level being higher than said third voltage level and of the same polarity relative to said reference voltage level whereby in response to an input signal on the input means, when the first transistor is on, a current path is provided between said third voltage level and said reference voltage level through said first transistor to said output means to provide electrical output at one electrical voltage level relative to said refernce voltage level and when the first transistor is off a current path is provided between said second voltage level and said reference voltafe level through said second transistor to provide electrical output at an opposite but matched electrical voltage level relative to said reference voltage level, a wave-shaping network forming part of said output means, said wave-shaping network including a resistor-capacitor network having at least two capacitors through which said output means is connectable to said reference voltage level, said first and second capacitors being connected in parallel with respect to each other, and a switch in series with at least one of said capacitors, operation of said switch being effective to selectively alter the charging rate of said resistor-capacitor network.

PMT/B 29-4 Circuit Device for Contact-Free Intergrated Circuit Control Modules (U.S.P. 3,506,844)
1. A circuit device for contact-free integrated circuit contril modules having an output circuit comprising two transistors connected in totem-pole output circuit arrangement which are connected to a current supply and voltage supply source and which have switching paths connected in series with the emitter electrode of one transistor being connected to the collector electrode of the other transistor whereby the output of one module of a group of modules is galvanically connected to the input of a module of another group of modules via a multi-wire connecting line, said circuit device comprising a diode poled in blocking direction relative to the operational voltage of said voltage supply source and integrated with the circuit for eliminating the signal delays caused by capacitative coupling influences and occurring between the individual paralled connecting lines, said diode being connected in parallel with

REFERENCE TEXTS

PMT/B 30 Old Compounds Plus Carrier

PMT/B 30-1

(I) Antihypertensive Compositions (U.S.P. 3,288,677)
A solution for parenteral administration consisting essentially of from about 0.01 g./ml. to about 0.1 g./ml. of a member selected from the group consisting of p-halogeno-benzyl-guanidine, in which halogeno has an atomic weight between 19 and 80, both inclusive, and a pharmaceutically acceptable acid addition salt thereof, as the active antihypertensive ingredient, together with a pharmaceutically acceptable carrier.

(II) Oral Compositions for Caries Prophylaxis (U.S.P. 3,235,459)
An oral composition for caries prophylaxis comprising at least one N-alkylol quaternary ammonium fluoride selected from the group consisting of methyltriethanol ammonium fluoride, dimethyldiethanol ammonium fluoride, and trimethylethanol ammonium fluoride, in a quantity sufficient to provide from about 100 parts to about 7500 parts of fluorine per million parts of the total composition, and a carrier suitable for use in the oral cavity, the pH of said composition being within the range from about 4 to 6 in aqueous solution.

(III) Riboflavin Beadlet Composition (U.S.P. 3,279,994)
As an article of manufacture, a riboflavin-active material in the form of pleasant-tasting beadlets having a diameter of less than about 150 microns; said beadlets being composed substantially entirely of from about 20 to about 45 percent riboflavin-active material, from about 3 to about 20 percent edible starch, and from about 45 to about 77 percent of a material comprising essentially a mixture of monoglycerides and diglycerides of naturally occurring saturated fatty acids having from 16 to 18 carbon atoms.

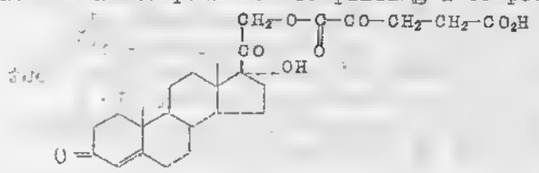
PMT/B 30-2

(I) Stable Long-Acting Adrenocorticotropic Hormone Preparations (U.S.P. 3,243,345)
A long-acting suspension of adrenocorticotropic hormone suitable for injection, and having strongly enhanced stability, comprising an aqueous suspension of a combination of adrenocorticotropic hormone and zinc hydroxide and containing further at least one member selected from the group consisting of: (a) an oxy acid of phosphorous, (b) an ester thereof derived from an alcohol selected from the group consisting of nucleosides, carbohydrates, polyalcohols, and hydroxy-amino acids, and (c) a pharmaceutically acceptable alkali metal salt

PMT/B 32-2(cont'd.)
selected from the group consisting of the primary, secondary, and tertiary sodium potassium and ammonium salts of said acid and of said ester, in a quantity between about 0.05 and about 0.70 mg. equivalent PO_4 per mg. equivalent zinc.

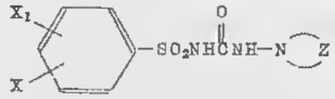
(II) Inhalant Compositions (U.S.P. 3,282,781)
A substantially anhydrous self-propelling medicament composition for inhalation therapy comprising a homogeneous solution of a medicament, a non-toxic propellant, a non-toxic organic solvent and a non-toxic hygroscopic glycol, the ratio of said solvent to said glycol in said composition being from about 3:1 to about 5:1 and the combined amount of organic solvent and glycol comprising from about 2% to about 25% by weight of the composition.

PMT/B 30-3
(I) Dihydronovobiocin and Derivatives Thereof (U.S.P. 3,175,944)
A composition of matter comprising dihydronovobiocin and a pharmaceutical carrier.
(II) Aniti-Depressive N-Morpholine-Betaethylhydrazine(U.S.P. 3,172,810)
A pharmaceutical composition in unit dosage form comprising a compatible pharmaceutical carrier and from 1 through 75 mg. of N-morpholine-beta-ethyl hydrazine.
(III) Composition for the Management of Post Antibiotic Enteritis (U.S.P. 3,174,899)
A pharmaceutical composition comprising about 1-5mg. 4:7-phenanthroline-5:6-quinone and an effective amount of an antibiotic selected from the group consisting of a ponicillin, a tetracycline, bacitracin, carbomycin, cycloserine, erythromycin, chloramphenicol, kanamycin, neomycin, oleandomycin, spiramycin per 10-6 mg. 5-thloro-8-hydroxy-7-iodoquinoline and an inert pharmaceutical carrier.
PMT/B 30-4
(I) Steroid for Dysproteinemia (U.S.P. 3,175,946)
A pharmaceutical composition comprising a compound of the formula



in an amount ranging from 0.5 to 5 mg. and a pharmaceutical carrier.
(II) Antihypertensive Quaternary Ammonium Salts of 1:2:3:4-Tetrahydroisoquinoline (U.S.P. 3,175,945)
A composition useful for the treatment of hypertension in animals, consisting essentially of a nontoxic salt selected from the group consisting of salts with a nontoxic anion of 2-methyl-2-ethyl-1:2:3:4-tetrahydroisoquinoline; 2-methyl-2-allyl-1:2:3:4-tetrahydroisoquinoline; 2-2-diethyl-1:2:3:4-tetrahydroisoquinoline; and 2-ethyl-2-(2'-hydroxyethyl)-1:2:3:4-tetrahydroisoquinoline; and a therapeutically acceptable carrier.

PMT/B 30-5 Novel N-Arylsulfonyl N'-(Cyclicamino) Ureas and Oral Antidiabetic Compositions Containing Said Novel Compounds (U.S.P. 3,063,903)
A composition effective for the treatment of diabetes comprising as active ingredient about 50 mg. to about 500 mg. of at least one compound selected from the group consisting of (1) N-arylsulfonyl-N'-(cyclicamino) urea free bases having the formula:



wherein X and X_1 are selected from the group consisting of hydrogen, halogen, alkyl of from 1 to 8 carbon atoms, inclusive, alkoxy of from 1 to 8 carbon atoms, inclusive, and primary amino (NH_2), and

is saturated heterocyclic amino selected from the group consisting of unsubstituted and mono- and polyalkyl substituted piperidino, morpholino, thiamorpholino, piperazino, pyrrolidino, hexamethyleneimino, heptamethyleneimino, octamethyleneimino, and homomorpholino wherein each alkyl is of from 1 to 4 carbon atoms, inclusive, and (2) pharmacologically acceptable acid addition salts thereof, and a diluent of a pharmaceutically acceptable carrier.

REFERENCE TEXTS

産業技術翻訳技能教育委員会
通信教育指導委員会

日本文「模擬訳例」に対する英訳の一例であります。産業技術翻訳技能教育委員会は、「唯一答案」または「標準訳例」など、「何等という語を使用することを禁じておりますので、通信教育指導委員会は、同委員会の意向を汲んで、単に REFERENCE TEXTS としました。ここに掲げられている英文は、優れた翻訳の一例でありますから、受講者自身が行なった訳文と照合して研究されるのに使用されることを望みます。

PMT/B 31 "Thereby" Clauses — Mechanical Claims

PMT/B 31-1 Machine for Operatign on Elongated Workpieces (U.S.P. 3,157,333)

In a machine for operating on elongated workpieces, the combination of, a base adapted to support a workpiece, a slide mounted on said base to move toward and away from a predetermined position, a tool operable to cut a workpiece supported on said base, gripping means carried by said slide and adapted to grip the workpiece and advance the same toward said tool as the slide moves toward said position, a plurality of stop elements mounted on said base and spaced apart transversely of the direction of movement of said slide, said elements being spaced different distances from said position, a sensing device mounted on said slide to move transversely thereof for selective alinement with said stop elements, said sensing device and the selected one of said elements producing a signal when adjacent each other, and a reversible power actuator operable to move said slide away from said position and reversible in response to said signal whereby the selected stop element determines the length of advance of the workpiece.

PMT/B 31-2 Ventilating or Air-Conditioning System for Vehicles (U.S.P. 3,157,104)

Ventilating apparatus for a vehicle having a vehicle body including a passenger compartment, and a windshield, means formin a pair of air inlet openings through said body, said air inlet openings being provided essentially directly in front of and closely adjacent to lateral ends of said windshield in regions of said body between the high positive pressure point within the central longitudinal plane of the vehicle in front of the windshield and the points of highest negative pressure on either side of the vehicle laterally of the passenger compartment where the entering air pressure is essentially independent of the velocity of the vehicle, the surface of the body containing said air inlet openings being essentially parallel to the direction of air flow along said vehicle body in the vicinity of said inlet openings, channel means connecting said inlet openings with the interior of said vehicle and means within said channel means for equalizing any pressure differential between the air flow from the pair of air inlet openings.

PMT/B 31-3 Apparatus for Producing an Air Curtain (U.S.P. 3,157,105)

An apparatus for producing a. air curtain to screen a generally rectangular door opening in an enclosure wall against penetration by convection currents, comprising an elongated plenum chamber extending substantially horizontally above said opening, blower means coupled with said plenum chamber for supplying air thereto, an elongated nozzle on said plenum chamber communicating with the interior therewith, said nozzle having a pair of longitudinally extending parallel panels inclined with respect to said wall at an angle between substantially 15 and 25° for producing an air current across said opening downwardly diverging from said wall at said angle, said panels forming between them an air-outlet slot extending

PMT/B 31-3 (cont'd.)
substantially over the full width of said opening and facing a floor surface near the bottom of said opening, one of said panels lying closer than the other to said wall, and sealing means between said one of said panels and said wall above the lower edge of said one of said panels forming a reflecting surface for upwardly circulating air branched off said air current at said floor surface, said one of said panels being provided with air-entrance means below said reflecting surface for aspirating part of said upwardly circulating air into said nozzle.

PMT/B 31-4 Shutter Devices for Photographic Cameras (U.S.P. 3,157,100)
A shutter driving device for a photographic camera having a shutter and a means for taking up film comprising the combination of a first rotable member adapted to be rotated by the means for taking up film, a second rotatable member having a lug projecting therefrom and having means thereon adapted to be articulated to the shutter, said first member and said second member being rotatable about a common axis for rotational movement relative to each other, an operating spring member disposed about said common axis and having ends thereof connected to said first and second rotatable members respectively, said first member having a projection thereon projecting into the path along which said lug on said second member is movable during rotation of said second rotatable member, and a rockable element adjacent said first and second rotatable members and rockable from a first position in which it abuts against said lug on said second member to prevent rotational movement of said second member to a position in which it is disengaged from said lug on said second member.

PMT/B 31-5 Railroad Brakes (U.S.P. 3,157,033)
In a hydraulic master cylinder of the kind having a piston reciprocal with an inner bore; means affording an inlet to the bore adapted to be connected to a reservoir of hydraulic fluid being selectively operable to compensate for the amount of fluid within the bore; means affording an outlet for the bore adapted to be connected to a hydraulic power cylinder; valve means for regulating the fluid flow through the inlet; resilient means normally biasing the valve means to an open position for communicating said inlet with said bore and said outlet, whereby the reservoir may provide hydraulic fluid to compensate for variations in volume of the hydraulic fluid, said valve means being moveable to a close position against the bias of said resilient means by actuation of the piston in a forward direction to thereby block fluid flow from the bore to the inlet of the master cylinder; a normally expandable spring means positioned between the end wall of the bore and the rear of the piston and effective to space the piston forwardly of its rearwardmost position in the cylinder, and said spring means being adapted to be contracted by fluid under pressure at the forward side of the piston when said reservoir of hydraulic fluid is inoperable so that said spring means may move said piston within said bore to compensate for variations in volume of the hydraulic fluid; a return spring means for returing said piston to a position within said bore, and a valve closing spring means reversely wound to said return spring means and operable by said piston to close said valve means.

(RVD-4903-200)

REFERENCE TEXTS

産業技術翻訳技能教育審議会
通信教育指導委員会

日本文「練習課題」に対する英訳の一例であります。産業技術翻訳技能教育審議会は、「標準答案」または「標準翻訳」など、「標準」という語を使用することを禁じておりますので、通信教育指導委員会は、同審議会の意向を汲んで、単に REFERENCE TEXT(S) としました。ここに掲げられている英文は、優れた翻訳の一例でありますから、受講者自身が行なった翻訳と照合して研究するために使用されることを望みます。

PMT/B 32 Functional Claiming —— Chemical Claims

PMT/B 32-1

(1) Process for Producing of Low-Calorie Sweetening Composition (U.S.P. 3,320,074)

A process for preparing a sweetening composition, comprising spray-drying a pressurized, aerated, aqueous solution containing between about 30% and about 65% by weight of dextrin substantially free of mono-, di-, and trisaccharides, and from about 1% to about 12%, based on the weight of the dextrin, of noncaloric artificial sweetener, under conditions producing granular, free-flowing particles having a moisture content below about 10%, said solution being aerated with sufficient gas which is noninflammable and unreactive with the constituents of said solution to provide a product having a bulk density not exceeding 0.15 g./cc.

(11) Foamable Polymer Compositions Wherein the Blowing Agent is the Reaction Product of an Azodicarboxylate and an Amine (U.S.P. 3,320,189)

A foamable polymer composition comprising a thermoplastic polymer and a product obtained by reacting in solution a lower alkyl azodicarboxylate and an amine selected from the group consisting of lower alkylenediamine, piperazine and p-phenylenediamine at a reaction temperature below that at which decomposition occurs with evolution of gas, said product being present in an amount effective to foam said polymer.

PMT/B 32-2

(1) Polymerization of Alkylene Oxides in the Presence of Aluminosilicate Catalysts (U.S.P. 3,321,412)

A process for polymerizing alkylene oxides which comprises effecting polymerization of an alkylene oxide containing from 2 to 8 carbon atoms and having an oxygen bridge between immedately adjacent carbon atoms under reaction conditions in the presence of from 1 to 15 percent by weight of a catalyst, based on the weight of the alkylene oxide, said catalyst consisting essentially of a crystalline aluminosilicate having active cation sites within its ordered internal structure, said ordered internal structure having a defined pore size of at least 6 A.

(II) Butyl (Butylthio) Thiolacetate, and Method of Preparing Thiol Esters (U.S.P. 3,320,300)

Butyl (butylthio) thiolacetate.

A method of preparing a thiol ester having a sulfide linkage alpha to the ester group comprising contacting a thiol with a compound selected from the group consisting of dihalo aldehydes and trihalo aldehydes, the contacting being carried out under a pressure sufficient to keep the reactants substantially liquid and when the compound is dihalo aldehyde at a temperature of from about 20 to about 300°C. and when the compound is trihalo aldehyde at a temperature of from about 150 to about 300°C.

PMT/B 32-3 Method of Processing Steel (U.S.P. 3,320,099)
A method of processing steel to produce a substantially non-aging, ductile product comprising:
(a) adding to a melt of aluminum-killed steel which has a carbon content of at least 0.08%, not more than 0.6% manganese and not more than 0.02% silicon, a nitrogen-bearing compound in an amount to provide a final nitrogen content in the steel of from 0.008 to 0.015% by weight and then solidifying said melt,
(b) substantially completely dissolving said nitrogen in said steel by maintaining said steel at nitrogen-dissolution temperature,
(c) hot rolling said steel at a temperature above about 1520°F.,
(d) rapidly cooling the hot rolled steel to a temperature below about 1100°F. to minimize precipitation of aluminum-nitride and thereafter cold reducing said steel,
(e) annealing said cold reduced steel for a time sufficient to obtain a recrystallized, elongated grain structure wherein the grains are not larger than ASTM No.7 and to precipitate aluminum-nitride around said grains whereby the growth of said grains during annealing is restricted by said aluminumnitride, and
(f) temper rolling to increase the yield strength of the steel.

PMT/B 32-4 Regeneration of Chelating Solutions (U.S.P. 3,321,521)
A method of obtaining an aqueous solution of NR_4OH from an aqueous solution containing NR_4^+, H^+, $H_2EDTA^=$, $CaEDTA^=$ and $AlEDTA^-$, wherein NR_4^+ is a tetraethylammonium ion and wherein said EDTA represents the ethylenediaminetetraacetate ion, comprising:
(a) adjusting the solution to a sufficiently low pH with an acidic additive to induce H_4EDTA to precipitate; and
(b) adjusting the pH of the remaining solution so that it is sufficiently basic to form insoluble compounds containing aluminum and calcium, said pH being adjusted with at least one base whose cation will form with the anion of said acidic additive an insoluble compound which will precipitate in the solution.

PMT/B 32-5
(I) Arc Torch Reduction of Metal Halide (U.S.P. 3,320,145)
A process for reduction of metal halides to metal comprising passing a stream of hydrogen through a collimated electric arc; contacting the effluent stream of highly reactive hydrogen downstream from said electric arc with a metal halide; essentially maintaining the mole ratio of hydrogen to metal halide greater than 2 and simultaneously essentially maintaining at least 100 Kcal. of energy per gram mole of said metal halide in the reaction zone during reaction between said effluent stream of hydrogen and said metal halide; and cooling and recovering powders of the metal of said metal halide.
(II) Preparation of Alkyl Esters of Parahydroxybenzoic Acid(U.S.P.3,321,509)
A process for the recovery of alkyl ester of p-hydroxybenzoic acid from a reaction mixture consisting essentially of said ester, excess and unreacted alkanol and impurities resulting from the esterification of p-hydroxybenzoic acid with said alkanol, which comprises heating the reaction mixture to a temperature of 100 to 170°C., then passing live steam into the thus-heated reaction mixture, whereby said unreacted alkanol and impurities are expelled, and discontinuing the introduction of the live steam when the reaction mixture residue, after being dried, has a maximum melting point, said alkyl group being alkyl of from 1 to 12 carbon atoms and said alkanol being the corresponding alkanol.

REFERENCE TEXTS

産業技術翻訳技能教育委員会
通信教育指導委員会

「訳文」「翻訳例」に対する英語の一例であります。産業技術翻訳技能教育委員会は、「標準訳文」または「標準翻訳」など、「標準」という語を使用することを禁じておりますので、通信教育指導委員会は、同委員会の意向を汲んで、単にREFERENCE TEXT(S)としました。ここに掲げられている英文は、模範の翻訳の一例でありますから、受講者自身が行なった翻訳と照合して研究するために使用されることを望みます。

PMT/B 33 Critical Area

PMT/B 33-1 (I) Parentoral Sulfonamide Compositions and Processes (U.S.P. 3,288,675)
An aqueous composition for intramuscular injection comprising
a) from about 30 to about 50 percent w./v. of N1-(2,6-dimethoxy-4-pyrimidinyl)-sulfanilamide;
b) from about 10 to about 35 percent v./v. of a solubilizing agent selected from the group consisting of propylene glycol, glycerine, polyethylene glycol 300, polyethylene glycol 400, ethyl alcohol, and dimethylacetamide;
(c) from about 0.2 to about 2.5 percent w./v. of a pharmaceutically acceptable antibacterial preservative selected from the group consisting of benzyl alcohol, phenol and cresol;
(d) from about 0.005 to about 0.1 percent w./v. of a salt of ethylenediamine tetraacetic acid;
(e) from about 0.5 to about 0.4 percent w./v. of a pharmaceutically acceptable antioxidant selected from the group consisting of sodium formaldehyde sulfoxylate, sodium bisulfite, sodium sulfite, sodium thiosulfate and monothioglycerol;
(f) sufficient sodium hydroxide to give a pH of from about 9 to about 10.5; and
(g) the remainder water.
(II) Synergistic Diuretic Composition (U.S.P. 3,323,997)
The method of achieving diuresis in a person suffering from water retention, which involves administering to that person (A) from 10 to 100 mg. of ethacrynic acid and coadministering substantially simultaneously therewith a compound selected from the class consisting of (B) 10 to 100 mg. of dichlorphenamide and (C) from 100 to 1000 mg. of acetazolamide.

PMT/B 33-2 (I) Anti-Bacterial Chemical Process (U.S.P. 3,282,777)
The method of disinfecting an aqueous soluble oil formulation comprising the steps of introducing iodine ions therein in an amount sufficient to provide a total available iodine concentration of from about 1 p.p.m. to about 50 p.p.m., acidifying and buffering said formulation to a pH ranging from about 5.5 to about 6.5, oxidizing at least a portion of the iodide ions to the element state in which they are effective to attack and destroy any microbial contamination in said formulation, controlling the oxidation so as to provide a continuous concentration of said elemental iodine in an amount ranging from about 1 p.p.m. to about 50 p.p.m., and reoxidizing said iodide ions formed as a result of the reduction of the elemental iodine back to the elemental state.
(II) Method of Preparing Sustained Release Tablets (U.S.P. 3,279,998)
In a method of preparing compressed sustained release pharmaceutical tablets having a medicament dispersed throughout a non-granulated comminuted material which is resistant to disintegration and slowly dispersible in the gastrointestinal tract and which has not been previously subjected to compression the improvement which consists essentially of mixing uniformly from at least about 7% to about 95% of a solid sustained

(to be cont'd.)

PMT/B 33-2 (cont'd)
release material having a particle size of from about 10 microns to about 1500 microns and being resistant to disintegration and slowly dispersible in the gastrointestinal tract with a medica ment having a particle size of from about 10 microns to about 1500 microns nd then compressing said mixture into a tablet.

PMT/B 33-3 (I) Instantly Assimilable Vitamin Product (U.S.P. 3,243,347)
A dry, granular vitamin and mineral preparation adapted to be dissolved in beverages without bad taste, comprising per unit dose about 0.5-3 grams of non-fat dry milk solid granules made larger, harder and more absorbent by the addition of between about 0.1 and 0.2% by weight of propylene glycol, said granules having adsorbed therein dry vitamins and minerals.

(II) Gelatin Composition (U.S.P. 3,239,420)
A soft-shell gelatin capsule having within it a mixture consisting essentially of a homogeneous mixture of a collagen hydrolysate containing between about 26.25 weight percent collagen hydrolysate up to about 50.40 weight percent collagen hydrolysate, water, and a sufficient amount of a liquid non-toxic hygroscopic agent to render the collagen hydrolysate free flowing, and to prevent it from hardening.

(III) Non-Toxic Intravenous, High-Calorie Solution Containing Glycerol (U.S.P. 3,234,089)
A method of intravenous fluid nutrition comprising infusing into a patient a sterile non-pyrogenic solution containing in each 100 cc. thereof, from 2 to 6 grams ethanol, from 8 to 16 grams glycerol, and from 8 to 16 grams of a carbohydrate selected from the group consisting of glucose and fructose, with the weight of carbohydrate being at least equal to the weight of glycerol.

PMT/B 33-4 (I) Use of Methanoindanamines as Antiviral Agents (U.S.P. 3,290,215)
A method of controlling virus infection in a warm-blooded animal comprising administering to said warm-blooded animal from 1 to 200 milligrams per kilogram per day of body weight of a compound selected from the group consisting of

(a) compounds of the formula

where
R' is selected from the group consisting of hydrogen; alkyl of 1 through 4 carbon atoms; alkenyl of 3 through 4 carbon atoms, having unsaturated bonding in other than the 1-position of said alkenyl; and alkynyl of 3 through 4 carbon atoms, having unsaturated bonding in other than the 1-position of said alkynyl group;
R'' is selected from the group consisting of hydrogen and formyl; and
n is an integer from 0 to 1; and
(b) non-toxic salts of the compounds of (a).

(to be cont'd.)

PMT/B 33-4(Cont'd.)

(II) Inhalation Aerosol Suspension of Anhydrous Disodium Dexamethasone Phosphate, Propellents and, Sorbitan Trioleate (U.S.P. 3,282,791)

A substantially anhydrous self-propelling dexamethasone phosphate composition suitable for inhalation aerosol therapy and capable of being administered in substantially reduced dosages as compared to other modes of administration consisting essentially of a suspension of substantially anhydrous disodium dexamethasone phosphate having a particle size in the range of from about 1 to 10 microns in a liquid nontoxic propellent having a vapor pressure between about 15 and 70 pounds per square inch gauge at 70° F. with sorbitan trioleate as a dispersing agent, the ingredients being present within the ranges:

	Percent by weight
Disodium dexamethasone phosphate	0.001 to 0.18
Sortitan trioleate	0.01 to 2
Propellant	Remainder (substantially)

PMT/B 33-5 (I) Anthelmintic Preparation (U.S.P. 3,288,676)

A veterinary preparation comprising a substantially colloidal mixture of molasess and an anthelmintic selected from the group consisting of phenothiazine, hexachloroethane, and thiabendazole in a proportion of the order of 2.5 to 40% by weight anthelmintic to molasses, a calcium soap of hydrogenated tallow added thereto and the components are fused together by heat and made solid by the extraction of liquid therefrom, said fusing and liquid extraction being carried out under a vacuum of the order of 20 to 26 inches and at a temperature up to 185°C.

(II) Stable Liquid Colloidal Tannate Compositions (U.S.P. 3,282,789)

A liquid composition suitable for oral administration comprising:

(a) a stable aqueous colloidal dispersion of a water insoluble therapeutically active tannate in a concentration up to 10%,

(b) a pharmaceutically acceptable alcohol in a concentration of 2 to 20 percent; and

(c) a pharmaceutically acceptable gum in a concentration of from 0.5 to 5.0 percent.

(III) Method of Tranquilization Employing 10-Chloro Deserpidine (U.S.P. 3,285,815)

The process of tranquilizing persons and animals without exerting a substantial depressing effect upon the central nervous system, said process consisting in administering to persons and animals a compound selected from the group consisting of 10-chloro deserpidine and its therapeutically active acid addition salts in an amount between about 0.1 mg./kg. and about 0.5 mg./kg. per day.

REFERENCE TEXTS

産業技術翻訳技能教育委員会
通信教育指導委員会

日本文「特許明細」に対する英訳の一例であります。産業技術翻訳技能教育委員会は、「標準答案」または「標準翻訳」など、「標準」という語を使用することを禁じておりますので、通信教育指導委員会は、同委員会の意向を汲んで、単にREFERENCE TEXT(S)としました。ここに掲げられている英文は、優れた翻訳の一例でありますから、受講者自身が行なった翻訳と照合して研究するために使用されることを望みます。

PMT/B Means Claims - Mechanical Claims

PMT/B 34-1 Sonic Pulse Generator (U.S.P. 3,154,013)
A watertight device for generating a series of easily distinguishable sonic pulses under water, which can be field adjusted to regulate the interval between the sonic pulses and which comprises a tubular shell, an ignition assembly sealing one end of the shell, a plurality of individually removable sonic pulse units disposed within the shell, a removable cap closing the other end of the shell, and a sleeve of elastic material peripherally engaging the exterior of the cap and the shell and sealing the joint therebetween, each of said individually removable pulse units comprising a tubular container open at the end nearest said ignition assembly and closed at the other end by a thin wall and, in sequence from said thin wall, a first thick-walled tube peripherally engaged by the interior wall of said container and having an axial bore filled with detonating explosive and a second thick-walled tube in snug peripheral engagement with the interior wall of said container and having an axial bore filled with deflagrating explosive, the exterior of said container being in snug peripheral engagement with the interior wall of said shell, and the quantity and distribution of detonating explosive being such that its detonation will not rupture the device when it is immersed in water.

PMT/B 34-2 Axial Thrust Bearing for Rotary Shafts (U.S.P. 3,154,353)
An axial thrust bearing for a shaft rotatable in a medium comprising a fixed supporting member having a symmetrical cavity accommodating a part of a shaft, the generatrix of said cavity being a curved line and having an axis of rotation coinciding with the center line of said shaft, said shaft having a central thrust member co-acting with said fixed supporting member in operation, the co-acting surfaces of said central thrust member and cavity having substantially the same general shape, one of said surfaces being provided with continuous and substantially identical shallow grooves which are regularly divided over at least a portion of the surface area, the center line of each groove forming a spiral whereby during operation of said bearing the medium is pushed from the outside of the bearing to the inside thereof, and a chamber centrally located in said one of said surfaces being provided with identical, shallow grooves, each groove opening into said chamber and the latter communicates with the outside of said bearing only through a space formed between one of the members and said grooves.

PMT/B 34-3 Missile Flight Control System (U.S.P. 3,154,015)
In an actuator mechanism, an improvement comprising:
(a) a frame;
(b) a cylindrical cammed member mounted to said frame so as to be free to rotate about the longitudinal axis of said cammed member and being annularly provided with a first and a second spiral cam spaced from each other along said longitudinal axis, the tracks of said first and said second spiral cams progressing in opposite directions along said longitudinal axis;

(to be cont'd.)

(cont'd.)
(c) means for rotating said cylindrical cammed member; and
(d) a first and a second cam follower independently engageable with said first and said second spiral cams, respectively, said cam followers and said cylindrical cammed member being displaced in one direction with respect to each other along said longitudinal axis when said first cam follower is engaged with said first spiral cam and said cam followers and said cylindrical cammed member being displaced in the opposite direction with respect to each other along said longitudinal axis when said second cam follower is engaged with said second spiral cam.

PMT/B 34-4 Calibration Adjustment for Control Device Setting Dials (U.S.P. 3,154,051)

In a control device having an adjustment shaft adapted to be rotated from a first position establishing a non-control condition to any of a multiplicity of other positions indicative of various other operational conditions,
the combination comprising
a knob having a hub portion extending axially therefrom,
wall means providing a shoulder at the juncture of said knob and hub portion,
said hub portion having an axial passage adapted to non-rotatably receive the said control device shaft, said axial passage having at the free end of said hub portion a radially extending slot, communicating therewith,
a dial rotatably mounted on said hub portion, said dial having on its obverse face a plurality of index markings representative of operational conditions of said control device and on its reverse face an index mark bearing a predetermined relation to a selected one of said obverse face markings,
and dial securement means for holding said dial frictionally against said shoulder,
comprising an annulus of springable metal including a plurality of gripping members defining the annular opening and arranged to permit the passage of said hub portion therethrough only in a direction whereby said dial may be frictionally confined against said shoulder,
a resilient friction member integral with said annulus and extending inwardly and substantially axially thereof to occupy said slot and said passage for establishing a uniform relation of said annulus and said hub portion,
and an index pointer projecting radially from said annulus in fixed relation to said friction member for registry with the said index mark on the reverse face of said dial.

PMT/B 34-5 Sealing Means for Rotary Pump Shafts and the Like (U.S.P. 3,154,020)

A turbine pump comprising a casing having an internal pumping chamber, a pump shaft mounted for rotation within said casing, an impeller and rotatable part fixed for rotation with said shaft and operable within

(to be cont'd.)

PMT/B 34-5 (cont'd.)

said pumping chamber, said impeller having vanes at its outer periphery operable within a channel, liners disposed within said casing an cooperating with opposite sides of said impeller inwardly of said vanes to form sealing surfaces therewith, a stationary annular seal bushing surrounding said shaft, and a ring closely fitting said rotatable part of the pump and fixed for rotation with said shaft including a pin rotatable with said shaft, said ring having a longitudinal groove engaging said pin for axial movement, said close fitting ring being disposed between said impeller and said annular seal bushing and movable longitudinally with respect to said shaft, said close fitting ring at the end toward said impeller being exposed to pressure from the impeller reaching the end of said close fitting ring along the sealing surface between the impeller and the liner whereby such pressure forces said close fitting ring longitudinally against said annular seal bushing to seal off pressure from said channel in which the vanes of the impeller operate.

REFERENCE TEXTS

[illegible] REFERENCE TEXT(S) [illegible]

PMT/B 35 Reliance on Functional Language - Chemical

PMT/B 35-1 Alkali Resistant Polyester Resins from Rosin (U.S.P. 3,317,445)

A process for modifying an unmodified rosin with a lactone, which process comprises the following steps:
(a) charging to a reaction vessel an unmodified rosin;
(b) blanketing the unmodified rosin with an inert gas;
(c) heating the unmodified rosin, with stirring, to at least 160°C. and to not more than about 200°C.;
(d) adding a lactone selected from the group consisting of -propiolactone and polymeric -propiolactone to the resulting molten rosin slowly to avoid excessive refluxing and loss of the lactone, said lactone being added in the amount of about from 3 to 25 parts per 100 parts of the unmodified rosin, all parts by weight;
(e) slowly increasing the temperature of the molten product of step (d) to not more than about 250°C.;
(f) maintaining a period of dwell for at least two hours and not more than six hours under the blanket of inert gas with stirring untilthe U.V. absorption at 241 millimicrons becomes constant; and
(g) thereafter recovering the resulting lactone-modified rosin.

PMT/B 35-2 Thermosetting Polybisphenols (U.S.P. 3,317,472)

A process for preparing a metal surface wetting, curable, and flexible resin product comprising the steps of:
(a) condensing in acid medium an alkylene-carbon monoxide copolymer having an alkylene-carbon monoxide mole ratio in the range of 2.5:1 to 8.0:1 with a phenolic compound selected from the group consisting of phenols having at least 2 unsubstituted ortho- and para-positions to form a polyketone phenolic compound condensate, and subsequently,
(b) reacting said condensate with a formaldehyde yielding compound in basic madium to methylolate a portion of the phenolic groups of the polyketone-phenol condensate.

PMT/B 35-3 Combination Catalyst-Inhibitor For Betahydroxy Carboxylic Esters (U.S.P. 3,317,465)

In the process of reacting an epoxy compound having a terminal epoxide group

```
-CHCH2
  \/
  O
```

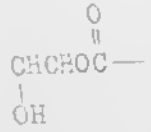
with a carboxylic acid having a terminal

```
  O
  ||
-COH
```

group to yield a beta-hydroxy ester having an internal

(to be cont'd.)

(cont'd.)



group, the improvement comprising:
carrying out the ester formation reaction in the presence of a catalytic amount of a mixture of triphenyl stibine and triphenyl phosphine.

PMT/B 35-4 Process for Copolymerizing a Conjugated Diolefin and a Vinyl Aromatic Hydrocarbon with a Coordination Catalyst and the Product (U.S.P. 3,317,492)

A process which comprises copolymerizing a conjugated diolefin hydrocarbon selected from the group consisting of butadiene-1,3 and isoprene with a vinyl aromatic hydrocarbon in the presence of a catalyst prepared by the interaction of (a) an aluminum compound of the general formula R_2AlX wherein R is selected from the group consisting of alkyl, cycloalkyl and aryl radicals and X is selected from the group consisting of hydrogen, halogen, alkyl, cycloalkyl and aryl radicals, with (b) a metal halide selected from the group consisting of the chlorides, bromides and iodides of titanium and zirconium, said copolymerizing being effected in the absence of material rendering said catalyst ineffective.

PMT/B 35-5 Preparation of Sodium or Potassium Salts of Polymyxin B and E (U.S.P. 3,317,506)

A method for producing a sodium salt of a sulphite methyl derivative of a member of a group consisting of a polymyxin B and E, comprising the steps of treating a water soluble neutral salt of the polymyxin with formaldehyde in an aqueous solution under nearly neutral conditions, preferably at a pH between 6.6 and 6.8, bringing the precipitate formed thereby into solution with about 1.2 equivalent of sodium bisulphite at a pH between 6.4 and 6.7, maintaining the solution until the pH has risen to a pH between 7.3 and 7.5 and a sample no longer forms a precipitate when acidified to pH 5.0, and then freeze-drying the remainder of the solution without delay to recover the product.

REFERENCE TEXTS

産業技術翻訳技能教育審議会
通信教育指導委員会

日本文「練習課題」に対する英訳の一例であります。本会技術翻訳技能教育審議会は、「標準答案」または「標準翻訳」など、「標準」という語を使用することを禁じておりますので、通信教育指導委員会は、同審議会の意向を汲んで、単にREFERENCE TEXT(S)としました。ここに掲げられている英文は、優れた翻訳の一例でありますから、受講者自身が行なった翻訳と照合して研究するために使用されることを望みます。

PMT/B 36 Relationship Between Specificaion and Claim

PMT/B 36-1(ME) Rolling Mill Structures (U.S.P. 3,159,063)
A rolling mill comprising a housing, a pair of work rolls in the housing on opposite sides of a pass line, said work rolls being adapted to receive strip therebetween and exert a working force transversely to the path thereof, journals for each end of the work rolls, a backup roll journaled in the housing adjacent each work roll and beating on said adjacent work roll, pressure means at the ends of each of said work rolls acting on and moving the journals of said work rolls substantially perpendicular to the path of the strip to cause the ends of said work rolls to move toward each other so as to cause a portion intermediate the ends thereof to engage a strip being rolled as a fulcrum and to bend said work rolls about said fulcrum to provide a desired strip contour, and pressure sensitive means in the vertical system made up of the journals of the work rolls and backup rolls sensitive to the overall pressure on the roll journals and acting on the pressure means at the ends of each of said work rolls to maintain a constant pressure at said journals.

PMT/B 36-2(ME) Protective Device for Cutting Machines with Cutting Disc (U.S.P. 3,159,196)
A cutting machine, especially for meat and cold cuts, which comprises: a housing, a rotatable cutting member in the housing having a peripheral cutting edge, an electric motor in the housing drivingly connected to said cutting member for rotating the same, a protective detachable hood normally mounted on the housing of said cutting machine and partially surrounding the cutting edge of said cutting member, said hood comprising magnetizable material, control means in the housing including magnetizable material for cooperation with the magnetizable material of said hood, said housing including an imperforate wall of nonmagnetic material bewteen said hood and said control means, said control means being movable into a first position in which said magnetizable material of said hood and the magnetizable material of said control means magnetically interact so as to exert an attractive force upon each other, said control means also being movable into a second position in which said magnetic interaction is interrupted, said hood cutter positioning said magnetizable means for interaction to cause said control means to occupy said first position when said hood is mounted on said machine and to occupy said second position when said hood is detached from said machine, and means responsive to the movement of said control means into said second position for preventing operation of said motor.

PMT/B 36-3(EE) Starter Protector for D.C.-A.C. Inverter (U.S.P. 3,159,799)
A transistor oscillator having an output circuit and an input circuit coupled to generate self-sustained oscillations, a direct current source connected in said output circuit, starter circuit means to momentarily bias the control electrode of the transistor to cause conduction and initiation of oscillation when the direct current power of said source is applied to the transistor, said means including a Zener diode and a storage condenser connected in series across the input circuit of said transistor, the Zener breakdown

PMT/B 36-3 (cont'd.)
voltage of said Zener diode being less than said direct current voltage of said source to discharge the charge of said condenser into said input circuit when the Zener breakdown voltage is exceeded, means for decoupling said starter circuit means after oscillation starts when the control electrode bias voltage drops, said means for decoupling comprising a second diode in series with said Zener diode, said second diode being reversely polarized with respect to said Zener diode to prevent forward current through said Zener diode, and a leakage resistance of high ohmic value connected across said storage condenser to discharge said condenser when oscillations cease.

PMT/B 36-4(EE) Analogue-to-Digital Converters (U.S.P. 3,159,829)
In an analogue-to-digital converter, a series of flip-flops, a clock pulse source, means responsive to said source for successively triggering and setting the flip-flops, a bus, a digit-voltage source associated with each flip-flop, the voltage of each source having a distinctive weighted value and being adapted to be applied to said bus by each flip-flop as the associated flip-flop is set; a comparator-gate having a controlled circuit and a controlling circuit, the controlling circuit being responsive to the relative values of the sum of the digit-voltages on said bus and the value of the voltage to be converted, a delay circuit, said delay circuit and said controlled circuit being connected in series and to said clock pulse source, means responsive to clock pulses which are passed by the delay and controlled circuit for resetting each flip-flop after the flip-flop is set and before the next clock pulse and for leaving each flip-flop in set condition the trigger pulse of which is not passed by said comparator-gate, and means for identifying and reading out the flip-flops which remain set after the clock pulse source has triggered all of said flip-flops.

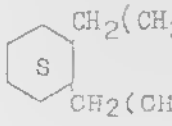
PMT/B 36-5(CS) Nonsticky Aluminum-Containing Antiperspirant
(U.S.P. 3,287,223)
A nontacky antiperspirant composition comprising, in parts by weight:

Saturated cyclic alcohol as hereinafter defined	4.00
Anhydrous ethyl alcohol	79.70
Aluminum chlorchydroxide (50% aqueous)	12.00
Dipropylene glycol	2.60
Perfume	1.50
Quaternary ammonium wetting agent	.20

said saturated cyclic alcohol being selected from the group consisting of the isomeric C_{18} mixture represented by the formula

where $(x+y)=8$

and the homologous C_{20} cyclic alcohols conforming to the formula



where $(x+y)=10$

PMT/B 36-5(CS) (cont'd.)

Flour Aggregation Process (U.S.P. 3,408,204)

A process for aggregating finely divided flour particles including the step of predrying the particles to a total moisture level substantially below the equilibrium moisture content of the flour for a given relative humidity and temperature without otherwise changing the nature of the constituents of the flour particles, subjecting the particles to an atmosphere of said given relative humidity and temperature to cause moisture to be diffused onto the particles to make their surfaces sticky and self-adhering, and causing said particles to collide randomly to adhere together in the form of aggregates having the same flavor and baking characteristics as the original flour particles.

REFERENCE TEXTS

産業技術翻訳技能教育委員会
通信教育指導委員会

日本文「練習問題」に対する英訳の一例であります。産業技術翻訳技能教育委員会は、「標準答案」または「模範翻訳」など、「標準」という語を使用することを禁じておりますので、通信教育指導委員会は、同委員会の意向を汲んで、単にREFERENCE TEXT(S)としました。ここに掲げられている英文は、優れた翻訳の一例でありますから、受講者自身が行なった翻訳と照合して研究するために使用されることを望みます。

PMT/B 37 Preambles to Claims --- Electrical Claims

PMT/B 37-1 Pulse-Type Regulating System for Generators (U.S.P. 3,154,733)
In a system for maintaining a desired level of output potential from a polyphase alternating current generator having a control winding to control the level of output potential, the combination of a sensing circuit connected to sense the generator output potential and including means for deriving a unipolar signal from the output potential, and means for mixing a constant potential with said unipolar signal to derive thereby a bipolar signal; a saturable core pulse generating circuit connected to receive said bipolar signal and operative to produce a rectangular pulse of predetermined time duration whenever said bipolar signal changes to a certain polarity; and a plurality of controlled rectifiers each connected between a different phase of the generator output potential and the control winding, each of said controlled rectifiers having a gate element so connected to receive said rectangular pulses and fire only the one of said controlled rectifiers associated with the most positive instantaneous phase potential, thereby providing a quantity of energization to the control winding inversely related to the generator output potential.

PMT/B 37-2 Automatic Gain Control System Utilizing a Network Containing a Short Time Constant and a Long Time Constant (U.S.P. 3,154,740)
A signal translating system having a gain level therein dependent upon the level and duration of a translated signal, including in combination, a gain establishing circuit connected to said signal translating system for establishing the gain thereof in response to a direct current control potential, a detector circuit including a short time constant integrating network rapidly responsive to a change in level of a translated signal in said system, said detector circuit being connected to said gain establishing circuit to provide a control potential for establishing the gain level upon initial increase in the signal level, a long time constant integrating network connected to said detector circuit and said gain establishing circuit to provide a control potential for maintaining the gain level established by said detector circuit, a first transistor controlled by said detector circuit, a resistor-capacitor timing network controlled by said first transistor, a second transistor connected in circuit with said long time constant integrating circuit and controlled by said resistor-capacitor timing network to provide a charge changing path for said long time constant integrating network upon the absence of a signal in said detector circuit and after f predetermined time established by said resistor-capacitor timing network.

PMT/B 37-3 Phase-Error Cancellation Heterodyne Receiver (U.S.P. 3,154,741)
A heterodyne receiver including in combination, a heterodyne mixer, an intermediate frequency amplifier coupled to said heterodyne mixer for amplifying the resulting intermediate frequency signal, and phase detection means coupled to said intermediate frequency amplifier, a local oscillator for generating local oscillations, a reference oscillator coupled to said phase detection means, said phase

PMT/B 37-3 (cont'd.)
detection means being responsive to the combined inputs from said intermediate frequency amplifier and said reference oscillator, phase shifter means coupled to said local oscillator and to said phase detection means and responsive to said phase detection means to produce a phase shift of the oscillations from said local oscillator, mixer circuit means coupled to said phase shifter and to said reference oscillator and responsive to said reference signal and to said oscillations for producing a heterodyning signal having an upper side band and a lower side band, and control means coupled to said mixer circuit means for alternately introducing said upper side band and said lower side band of said heterodying signal to the heterodyne mixer on a time shared basis, said phase detection means, said phase shifter means, said mixer circuit means, said control means, said heterodyne mixer and said intermediate frequency amplifier forming a closed phase loop having a predetermined time constant, said control means alternately introducing said upper and lower side bands to said heterodyne mixer at a rate high compared with the time constant of said phase loop.

PMT/B 37-4 Multiplying Devices (U.S.P. 3,154,679)
In a device for producing an lelectrical effect representative of the product of two variables x and y, the combination of a plurality of transformers interconnected to provide resultant alternating voltages the first of which is proportional to the vector sum of (x+y) and a quadrature voltage of standard value and the second of which is proportional to the vector sum of (x-y) and said quadrature voltage, means for rectifying said first and second alternating voltages to produce first and second unidirectional voltages, means for producing third and fourth unidirectional voltages each proportional to said standard value voltage, means for producing difference voltages the first of which is the difference between said first and third unidirectional voltages and the second of which is the difference between said second and fourth unidirectional voltages, means including Thyrite elements responsive to said difference voltages for producing correction voltages each proportional to the square of a different one of said difference voltages, an output terminal, means for applying each of said first and second unidirectional voltages as currents to said output terminal, and means for applying each of said correction voltages as currents to said output terminal to provide a combined resultant representative of the product of x and y.

PMT/B 37-5 High Speed Clutch and Brake Actuating Circuit (U.S.P 3,154,727)
In combination, first and second thyratrons each having an anode, a cathode and a control grid, first and second electromagnet coils each having at least first and second terminals, said first and second coils having the first terminals thereof respectively connected to the anodes of said first and second thyratrons, a capacitor connected between the respective second terminals of said first and second coils, a potential source connected to said secoud terminal of said first and second coils, bias means connected to said cathodes and said control grids of said first and second thyratrons to normally bias said thyratrons to the non-conducting state, means interconnecting the anodes and control grids of said first and second thyratrons to assure mutually exclusive operation thereof, and driving means connected to the control grids of said first and second thyratrons to control the conduction state therof, said capacitor connected such that surge current passes therethrough to one of said coils when the associated thyratron fires, said surge current being limited by the charge and discharge characteristics of said capacitor.

REFERENCE TEXTS

PMT/B 38 Cl..ing the Structure --- Mechanical

PMT/B 38-1 Piston and Cylinder Divice (U.S.P. 3,157,045)
A piston and cylinder device having cylinder with an axially extending bore therein, a piston head positioned in said bore and dividing said bore into two chambers, said piston head being movable axially within said bore through a stroke, means for supplying fluid air pressure to one of said chambers located on one side of said piston head, venting means for connecting the other of said chambers located on the other side of said piston head to an air pressure lower than said fluid air pressure to cause movement of said piston head toward said other side, resilient disk means movable into blocking position wherein said disk means blocks the flow of air through said venting means, said disk means being movable relative to said piston head, first magnetic means mounted on said piston head and movable therewith, said disk means being at least partially formed of magnetic material and located in the path of movement of said magnetic means, said magnetic means being spaced from said piston head to move said disk means into blocking position prior to the end of said stroke of said piston head, and second magnetic means for maintaining said disk means in blocking position during movement of said piston head after said disk means is located in blocking position.

PMT/B 38-2 Domestic Cooking Appliance (U.S.P. 3,157,175)
In combination, a range comprising, casing means defining an upper control compartment, an intermediate oven compartment and a lower compartment, said control compartment having a control panel spaced along one dege from said casing means to form an exhaust outlet from said control compartment, oven liner means in said oven compartment having an opening and spaced from said casing means along one side thereof to form a vent passage between said lower compartment and said control compartment, a door for closing said opening, means interconnecting said door and said casing means and extending through said vent passage for supporting said door between open and closed positions, means for heating in said oven liner means, means on said control panel remote from said exhaust outlet for controlling said heating means, drawer means slidably movable from a position within said lower compartment to a position outside of said lower compartment, and means including said drawer means defining an outside air inlet interconnecting said lower compartment with the atmosphere below said vent passage whereby an upsweep of air from said outside air inlet through said lower compartment, said vent passage, said control compartment and said exhaust outlet prevents portions of said casing means adjacent said oven liner means from overheating.

PMT/B 38-3 Steering Mechanism (U.S.P. 3,157,060)
In a steering system for a vehicle comprising a housing having a bore therein and a substantially flat surface thereon surrounding said bore, a manually rotatable steering shaft journaled in said bore, means including steering means supported adjacent one end of said steering shaft operable for reciprocal transverse movement relative to said steering shaft for controlling the movement of said vehicle, means adjacent said one end of said steering shaft engaging said steering means to control the direction of reciprocal

PMT/B 38-3 (cont'd.)
movement thereof in response to the rotation of said steering shaft, and resisting means mounted at said one end of said steering shaft and operable between said steering shaft and said housing for resisting relative rotation of said steering shaft with respect to said housing, said resisting means including a substabtially flat annular friction member nonrotatively mounted on said one end of said steering shaft for frictionally engaging said flat surface on said housing, resilient biasing means engaging an axially outer surface of said friction member for axially urging said friction member for axially urging said friction member against said flat surface, and means threadedly mounted on said shaft and coaxial with said resilient biasing means for adjusting the compression thereof to impart an adjustable degree of stability to the steering system.

PMT/B 38-4 Plate Type Friction Coupling (U.S.P. 3,157,057)
A torque transmitting mechanism comprising a cylindrical housing having spline teeth formed internally thereof, a shaft extending coaxially of said housing and having external spline teeth spacedly embraced by the internal spline teeth of said housing, a plate normal to and having internal spline teeth drivingly and slidably engaging the splines of said shaft, a pair of plates mounted within said housing in flanking relation to said firstmentioned plate and having external spline teeth slidably and drivingly engaging the internal splines of said housing, actuating means operable to effect frictional engagement between said plates, spring means acting on said flanking plates to release frictional engagement with said first-mentioned plate upon deenergization of the actuating means, and a plurality of leaf spring clips inserted and extending radially and axially between opposing root and outer lands of an angularly spaced plurality of the splines mounting said first-mentioned plate, said spring clips radially centering and frictionally damping axial movement of the first-mentioned plate relative to said shaft.

PMT/B 38-5 Drive Means for Sewing Machines (U.S.P. 3,157,142)
In a sewing machine having a frame and a main shaft journaled in said frame, a motor having a drive shaft disposed on an axis parallel to the axis of the main shaft, pulleys on said main shaft and said drive shaft, a belt entrained about said pulleys, and means for mounting said motor in said frame for adjustment of said drive shaft relatively to the main shaft to tighten said belt comprising a motor carrying member, means for securing the motor to said motor carrying member, said member having a slot, a fastening element extending through said slot and into said frame for releasably securing said member to said frame, and an eccentric on said fastening element and releasably secured by the same in angularly adjusted position, said eccentric being disposed in operative engagement with said motor carrying member for preventing displacement of said motor away from said main shaft and thereby defining a stop position and for adjustment of the stop position upon angular adjustment of said eccentric about the axis of said fastening element.

REFERENCE TEXTS

産業技術翻訳技能教育審議会
通信教育指導委員会

日本文「検討資料」に対する英訳の一例であります。産業技術翻訳技能教育審議会は、「標準答案」または「標準翻訳」など、「標準」という語を使用することを禁じておりますので、通信教育指導委員会は、同審議会の意向を踏んで、単にREFERENCE TEXT(S)としました。ここに掲げられている英文は、優れた翻訳の一例でありますから、受講者自身が行なった翻訳と照合して研究するために使用されることを望みます。

PMT/B 39 Claiming an Unknown Chemical Structure - Chemical

PMT/B 39-1 Antibiotic Complex BA-180265(AB) and Process for Making Same (U.S.P. 3,285,814)

An antibiotic prodcut which in purified form crystallizes from acetone as orange rectangular plates which soften and decompose at 265-268°C.; which produces a dark green color with alcoholic ferric chloride, a purplish red color with concentrated nitric acid and a deep green color in admixture with concentrated sulfuric and gallic acids; which substance has substantially the following analysis: 61.7% carbon, 4.6% hydrogen, 5.3% nitrogen, oxygen (by difference) 28.4%, and a methoxyl content of 5.7%, ultraviolet absorption maxima at 253, 300 and 370 with

$$E^{1\%}_{1cm.}$$ values of 688, 273, and 460

respectively, an optical rotation, $[\alpha]_D$ of -- 634° in chloroform solution, and which in solid form (KBr pellet) exhibits characteristic absorption in the infrared region of the spectrum at the following frequencies expressed in reciprocal centimeters: 3450 strong, 2850 strong, 2700 strong, 1640 very strong, 1575 strong, 1525 medium, 1460 strong, 1340 medium, 1285 strong, 1265 very strong, 1210 medium, 1185 strong, 1125 medium, 1100 strong, 1085 strong, 1040 medium, 1030 medium, 1020 medium, 1005 strong, 995 strong (choulder), 976 medium, 955 strong, 935 medium, 912 weak, 865 strong, 850 medium, 822 medium and 813 medium; and which crystallizes from chloroform in the form of lemon yellow hexagonal prisms which soften and decompose at 265-268° C.; which substance has substantially the following analysis: 57.8% carbon, 4.6% hydrogen, and 4.8% nitrogen, a methoxyl content of about 5.1%, a chlorine content of about 6.7%, an optical rotation $[\alpha]_D$ of -585° in chloroform solution and which in solid form (KBr pellet) exhibits characteristic absorption in the infrared region of the spectrum at the following frequencies expressed in reciprocal centimeters: 3450 medium, 2950 medium, 1640 strong, 1580 strong, 1525 medium, 1460 strong, 1430 strong, 1360 medium, 1280 strong, 1260 strong, 1210 medium, 1180 strong, 1100 medium, 1080 strong, 1005 strong, 955 strong, 875 medium, 855 medium, 818 strong and 750 strong and broad.

PMT/B 39-2 Antibiotic Lincomycin D and a Process for Producing the Same (U.S.P. 3,329,568)

1. A member of the group consisting of lincomycin D and the acid addition salts thereof, said lincomycin D being free base form of lincomycin D hydrochloride, a compound which

(a) is effective in inhibiting the growth of various gram-positive bacteria;

(b) is soluble in water and lower-alkanols, e.g., methanol, ethanol, and the like; and relatively insoluble in lower-alkanones, e.g., acetone, methyl ethyl ketone, isopropyl n-butyl ketone, and the like; lower-alkyl esters of lower-alkanoic acids, e.g., ethyl acetate, n-butyl acetate, amyl acetate, and the like; chlorinated lower-alkanes, e.g., methylene chloride, chloroform, ethylene dichloride, and the like; ether, and

(to be cont'd.)

(cont'd.)
benzene; and which in its essentially pure crystalline form has
(c) the following elemental analysis: C, 45.62; H, 7.78; N, 6.23; S, 7.31; Cl, 7.82; O, 25.24 (by diff.);
(d) an optical rotation $[\alpha]D^{25}+149^{\circ}$ (c., 0.923, water);
(e) a molecular weight of 450± 20 as determined by potentiometric titration, and
(f) a characteristic infrared absorption spectrum as shown in FIGURE II of the accompanying drawing.
2. A process which comprises cultivating Streptomyces lincolnensis var. lincolnensis in an aqueous nutrient medium containing methyl thiolincosaminide in an effective amount ranging from more than incidental impurities up to 8 gm./liter of aqueous nutrient medium, under aerobic conditions until substantial antibacterial activity is imparted to said medium by production of lincomycin D.

PMT/B 39-3 (I) Porfiromycin Derivatives and Method of Making Same (U.S.P. 3,306,821)

A composition of matter, x-methoxy-x-desaminoporfiromycin, which
(a) is effective in inhibiting the growth of Gram-positive and Gram-negative bacteria and its essentially pure crystalline form;
(b) is deep carmine red in color:
(c) has characteristic infrared absorption in mineral oil at the following wave lengths expressed in reciprocal centimeters:

3450	1706	1600	1303	810
3320	1665	1485	1070	760
3220	1642	1340	1005	715
1732	1625	1316	815	695;

(d) has an ultraviolet maximum in 5 percent ethanol of 320 mμ;
(e) has the following elemental analysis: C, 56.53; H, 6.07; N, 11.71; O, 25.83;
(f) has a melting point of 170-171°C.;
(g) and has a molecular formula $CH_3O(C_{16}H_{18}N_3O_5)$.

(II) Actinomycin Z and Method of Producing Same (U.S.P. 3,282,787)

1. Process for the manufacture of the antibiotic actinomycin Z, which comprises cultivating Streptomyces fradiae NRRL 2765 in an aqueous nutrient solution containing inorganic salts, and a source of nitrogen and carbon, under aerobic conditions, until the nutrient solution shows a substantial antibacterial action, and the antibiotic actinomycin Z is then isolated.
2. The crystalline antibiotic reddish-orange actinomycin Z prepared by the process of claim 1, melting at 260-264° C., having the optical rotation $[\alpha]D^{22}= -314^{\circ}$ (c=0.246 in chloroform), giving in the elementary analysis the following values: C=54.8%, 54.65%: H=6.42%, 6.57%; N=12.25%, 12.03%; O (calculated)=26.60% the ultraviolet spectrum of which in ethanol exhibits maxima at

(to be cont'd.)

PMT/B 39-3(cont'd.)
242 mμ ($\log E^{1\%}_{1cm.}$=2.34), at 429 mμ ($\log E^{1\%}_{1cm.}$=2.25) and at 443 mμ ($\log E^{1\%}_{1cm.}$=2.27)
and the infra red spectrum taken in potassium bromide, bands at 2.89 , 3.36μ , 3.40μ , 5.70μ , 6.05μ , 6.30μ , 6.60μ , 6.67μ , 7.07μ , 7.31μ , 7.58μ , 7.65μ , 8.36μ , 9.00μ , 9.12μ , 9.39μ , 13.30μ , and 14.40μ .

PMT/B 39-4 Acid-Addition Salts of Succinimycin (U.S.P. 3,210,246)
Acid-addition salts of succinimycin, said acid-addition salts being exemplified by the acetate which contains the elements carbon, hydrogen, nitrogen, oxygen, and iron; is relatively unstable in acidic and basic solutions; upon hydrolysis yields succinic acid, 1,5-pentanediamine, ammonia, methylamine, and proline; upon paper electrophoresis in 0.05-molar pH 4.0 acetate buffer for 2.5 hours at 360 volts and 12 milliamperes travels 7.9 centimeters from the origin toward the cathode; upon paper chromatography with 70:30 isopropyl alcohol:2.0-molar pH 6.0 acetate buffer exhibits an Rf of 0.40; upon paper chromatography with 80:20 ethanol:0.2-molar pH 6.0 acetate buffer exhibits an Rf of 0.52; is found by analysis to contain approximately 46% carbon, 7% hydrogen, 8.5% nitrogen, and 4.5% iron; has an equivalent weight of about 1000; exhibits an absorption maximum in the ultraviolet and visible region at 430 millimicrons in pH 7 phosphate buffer and exhibits prominent infrared absorption maxima at 3.00, 3.44, 5.78, 6.06, 6.35, 6.85, 7.03, 7.36, 7.94, 8.6, 9.7, and 13.1 microns in a potassium bromide disc; is further characterized by the loss of iron upon treatment with a chelating agent to form the iron-free compound, succinimycin acetate, which is an almost colorless material, contains the elements carbon, hydrogen, nitrogen, and oxygen; gives negative Ehrlich's, Fehling's, Benedict's, and ninhydrin tests, is found by analysis to contain approximately 48% carbon and 7.5% hydrogen, shows end absorption below 250 millimicrons but no appreciable absorption from 260-550 millimicrons, and has infrared absorption maxima at wavelengths substantially identical with those of succinimycin acetate.

PMT/B 39-5 (I) Antibiotic Product and Process of Producing Same
(U.S.P. 3,328,248)
An antibiotic which crystallizes from a pyridine-methanol (1:3) solution as pale yellow rectangular plates which melt with decomposition at 315-320° C., and which has substantially the following elemental analysis: 59.3% carbon, 4.6% hydrogen, 5.1% nitrogen and the balance being oxygen; a methoxyl content of 5.5%, and which produces a green color with alcoholic ferric chloride, a yellow color with concentrated sulfuric acid, a purplish red color with concentrated nitric acid and a reddish brown color with precipitate with alcoholic lead acetate; which substance exhibits ultraviolet absorption maxima at 250 mμ ,
and infrared absorption maxima when measured on a potassium bromide pellet at 3400, 2900, 2825, 1630, 1575, 928, 899, 845, 822, 802, 772, 712, 683, and 637 $cm.^{-1}$.

(cont'd.) (II) Antifungal Antibiotic and Method of Producing Same (U.S.P. 3,330,726)

A method for the treatment of an animal having a mycosis which comprises administering topically to the animal in an amount sufficient to relieve said mycosis a fungicidal product which has melting point 265° C. with decomposition, which possesses an optical rotation $[\alpha]_D^{20}$ of + 292° (c=1, pyridine), which is soluble in pyridine, dimethylformamide, acetic acid and methanol, slightly soluble in butanol, acetone, benzene and dioxan and practically insoluble in water, which is amphoteric, which has the elemental analysis C=59.30-59.35%. H=7.55-7.85%, O=29.30-29.55% and N=1.90-1.95%, which in its ultra-violet spectrum has four principal absorption maxima.

REFERENCE TEXTS

産業技術翻訳技能教育委員会
通信教育指導委員会

日本文「練習問題」に対する英訳の一例であります。産業技術翻訳技能教育委員会は、「標準答案」または「標準翻訳」など、「標準」という語を使用することを禁じておりますので、通信教育指導委員会は、同委員会の意向を汲んで、単にREFERENCE TEXT(S)としました。ここに掲げられている英文は、優れた翻訳の一例でありますから、受講者自身が行なった翻訳と照合して研究するために使用されることを望みます。

PMT/B 40 Narrow Limitations -- Electrical Claims

PMT/B 40-1 Memory Sense Amplifier Circuit (U.S.P. 3,519,848)
A sense amplifier circuit for a memory system having a normal mode sense output circuit which carries a common mode voltage which may be of either a positive or negative polarity, said sense amplifier circuit comprising a balanced transistor amplifier circuit having an input connectable to the normal mode sense output, said amplifier circuit including a pair of transistor elements arranged in a common emitter configuration, means forming a part of said balanced amplifier circuit for attenuating common mode voltage changes and for amplifying normal mode voltages of either polarity, an output circuit for sense signal strobing, and means including a transformer for coupling said balanced amplifier circuit to said output circuit, wherein a circuit input resistor element is connected in a circuit branch between base connections of said transistor elements to accept signals from the sense output circuit, and said attenuating and amplifying means includes respective divided resistance circuits connected in the transistor base-emitter loops and a capacitor element connected between the division points of said divided resistance circuits.

PMT/B 40-2 Emergency Warning System (U.S.P. 3,519,749)
An emergency communication system comprising: a transmitter for transmitting a continuous radio frequency signal modulated at predetermined intervals for constant durations, said intervals defining channels: a receiver including means receiving said radio frequency wave and detecting means for generating a signal representative of the envelope of said received wave: a discriminator receiving the output of said detecting means for generating a signal only when said detector signal indicates that said modulations have occurred for a predetermined range of time, said discriminator including a level detector receiving the output of said detector means for generating a binary level signal only when said detector signal exceeds a predetermined limit, a first monostable circuit receiving the output of said level detector, and a gate circuit having a signal lead and an inhibit lead, said signal lead of said gate circuit receiving the output of said monostable circuit, and the inhibit lead of said gate circuit receiving the output of said level detector, whereby said discriminator generates an output signal at said gate only when said received signal is shorter than the output signal of said monostable circuit: and decoding means receiving the output signal of said discriminator for generating signals representative of said predetermined intervals between modulations of said transmitted radio frequency signal.

PMT/B 40-3 Frequency-Doubler Circuit (U.S.P. 3,519,846)/
In a wave-signal receiver adapted to receive a composite signal of the type having a suppressed-carrier subcarrier signal component and a pilot-carrier signal component of one-half the frequency of said subcarrier component, a single-stage frequency-doubler having an input circuit and an output circuit, comprising:
means for applying said pilot signal in common phase to said input and

PMT/B 40-3 (contd.)
output circuits:
means coupled between said input circuit and said output circuit for combining at said output circuit said applied output pilot-carrier signal with inverted and amplified alternate half cycles of said applied input pilot-carrier signal to create therein a signal containing half cycles recurring at twice the frequency of said pilot-carrier signal, said combining means including a single-stage transistor amplifier biased to operate only in response to common-polarity alternate half cycles of said applied input pilot signal for inverting and amplifying said common-polarity alternate half cycles to provide at said output circuit phase-inverted alternate half cycles of said pilotcarrier signal having an amplitude substantially twice the amplitude of half cycles of said applied output pilot-carrier signal.

PMT/B 40-4 Voltage Switching Device (U.S.P. 3,519,842)
An automatic voltage switching device comprising an electromagnetic rotary step switch of one circuit multicontact type connected to the output terminal of an upper limit voltage switch including a trigger circuit having two NPN transistors the emitters thereof being coupled to each other, the input of said trigger circuit being connected to the mid point of divided resistances between the positive and the negative terminals of a power source, and a current amplification circuit having a PNP transistor being coupled to the output of said trigger circuit, a fixed terminal of said rotary switch connected to a positive input-terminal of said voltage switch, a plurality of movable terminals of said rotary switches respectively connected to the positive electrodes of power source batteries connected in series in a plurality, negative electrodes of a group of power source batteries connected to a negative input terminal of said switch, between which and a fixed terminal of said rotary switch being inserted a load.

PMT/B 40-5 Electrical Power Supply System (U.S.P. 3,519,843)
A method of using two electrically driven electrical generating means, a prime mover elctrical generating means, and an electrical utility power source to energize a load requiring substantially uninterruptable electrical power, said method comprising:
alternately operating the electrical driven generating means for selected periods of time to energize the load with said periods selected to provide a minimum probability of failure of said electrically driven generating means during operation, energizing the electrically driven generating means with the electrical output of the prime mover generating means, after the passage of the selected period of time of operation of one electrically driven generating means, energizing the other electrically driven generating means by connecting it to the utility power source, and switching from the one electrically driven generating means to the other to energize the load and, after said switching, energizing said other electrically driven generating means from the prime mover generating means.

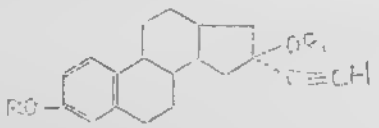
REFERENCE TEXTS

産業技術翻訳技能教育審議会
通信教育指導委員会

PMT/B 41 Method of Treatment - Pharmaceutical Claims

PMT/B 41-1 (I) Novel 16 -Ethynyl-19-NOR- $^{1,3,5(10)}$-Androstatrienes (U.S.P. 3,282,786)

A method of treating hypercholesterolemia in warmblooded animals which comprises administering daily to the animals an effective amount of a 16 -ethynyl-19-nor- $^{1,3,5(10)}$-androstariene of the formula



wherein R is selected from the group consisting of hydrogen, lower alkyl having 1 to 7 carbon atoms and an acyl radical of an organic carboxylic acid having 1 to 8 carbon atoms and R_1 is selected from the group consisting of hydrogen and an acyl radical of an organic carboxylic acid having 1 to 8 carbon atoms.

(II) Anti-Epileptic 1-Cyclohexyl-2-Methyl-Amino Propane Salt of Phenyl Ethyl Barbituric Acid (U.S.P. 3,210,247)

The process of treating epileptic patients consisting in administering to such epileptic patients the 1-cyclohexyl-2-methylamino propane salt of phenyl ethyl barbituric acid in a daily dose between about 50 mg. and about 800 mg. subdivided in 3 to 4 doses.

(III) Anti-Microbial Therapeutics Consisting of Nitrofurantoin, Tetracycline, and D-Glucosamine (U.S.P. 3,328,258)

A medicinal composition for the treatment of infectious diseases caused either by gram-positive bacteria, particularly streptococcus pyogenes or by gram negative bacteria, particularly E. coli, consisting as active ingredients of

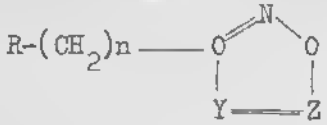
(a) a member of the class consisting of N-(5-nitro-2-furfurylidene)-1-aminohydantoin and its non-toxic salts;

(b) a member of the class consisting of tetracycline and its non-toxic salts, and

(c) a member of the class consisting of 2-amino-D-glucose and its non-toxic salts.

PMT/B 41-2 (I) Process of Treating Helminthiasis with Oxadiazole Derivatives (U.S.P. 3,279,986)

The process of treating helminthiasis which comprises administering to a helminth-infested animal host an effective dose of between about 50 and about 1000 mg./kg. of host body weight of a compound of the formula:



wherein

n is a whole number from 0 to 3;

R is selected from the group consisting of C_1-C_8 alkyl, phenyl, naphthyl,

(to be cont'd.)

(cont'd.)
fluorenyl, phenyl substituted by a member of the group consisting of C_1-C_4 alkyl, C_1-C_4 alkoxy, C1-C6 alkylamino, C_2-C_6 dialkyl-amino, hydroxy, halo, nitro, cyano, and trifluoro-methyl, and heterocyclic rings selected from the group consisting of pyridine, thiophene, furan, thiazole, oxazole, and pyrazole; and
Y and Z are selected from the group consisting of H-C and N, Y being H-C when Z is N, and Y being N when Z is H-C.

(II) Aldosterone in the Treatment of Psoriasis (U.S.P. 3,328,254)

A method for treating a human subject afflicted with psoriasis by administering daily to said subject about 5 to 35 micrograms of aldosterone until amelioration.

(III) Antibacterial Nitrofurfurylidene Derivatives and Methods of Using Same (U.S.P. 3,290,213)

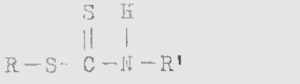
A method of treating a subject having an infection caused by a microorganism selected from the group consisting of E. coli, B. typhosum, B. dysenteriae, and Staphylococcus aureous, which comprises administering to the infected subject an amount of 5-nitrofurfurylidene hydrazide of 4-hydroxybenzoic acid sufficient to control the infection, but in an amount insufficient to cause toxic symptoms in said infected subject.

PMT/B 41-3 (I) Thiazolidine-4-Carboxylic Acid and Its Ester in a Hair Composition (U.S.P. 3,243,346)

A method of treating hair comprising topically applying thereto an effective amount of a compound selected from the group consisting of L-thiazolidine-4-carboxylic acid, L-thiazolidine-4-oxymethyl, L-thiazolidine-4-carboxymethyl ester, L-thiazolidine-4-carboxyethyl ester, L-thiazolidine-4-carboxy-cetyl ester, L-thiazolidine-4-carboxyphanthanol ester, sodium salt of I-thiazolidine-4-carboxylic acid, ammonium salt of L-thiazolidine-4-carboxylic acid, $C_4H_6NS.N(C_2H_5OH)_3$ and $C_4H_6NS.C_4H_9NO$.

(II) Coccidiosis Control Compositions and Methods of Using Same (U.S.P. 3,234,087)

A method of treating coccidiosis in animals and poultry which comprises oral administration of an effective quantity of a dithiocarbamate of the formula:



wherein
R is a member of the group consisting of phenyl and phenyl substituted by at least one member of the group consisting of halogen, nitro, amino, alkyl of 1 to 5 carbon atoms, alkoxy of 1 to 5 carbon atoms and hydroxy; and R' is a member of the group consisting of unsubstituted alkyl of 1 to 5 carbon atoms and alkenyl of 2 to 5 carbon atoms substituted by one member of the group consisting of halogen, nitro, amino, cyano and hydroxy.

(to be cont'd.)

PMT/B 41-3(cont'd.)

(III) Dressing for a Wound Containing a Hemostatic Agent and Method of Treating a Wound (U.S.P. 3,328,259)

The method of treating a wound from which plasma flows or oozes, comprising applying to the wound, a flexible body large enough to cover said wound, said body containing a water-soluble, plasma-soluble cellulose derivative having hemostatic and film-forming properties and having the property of combining with the plasma in the wound to form with the plasma an artificial water-insoluble eschar, said cellulose derivative being present in non discrete form in said body and in proportions to cause said body to be effective in coagulating the plasma issuing from said wound.

PMT/B 41-4 (I) Methods of Therapy Employing Magnesium Glucoheptonate (U.S.P. 3,063,896)

A method of treating mammalian digestive tracts which comprises administering to the said mammal at least 4.0 g. of magnesium glucoheptonate.

(II) 1-Methyl-3-Carboxy-6,7-Dimethoxy-4-(1H)-Quinolone Proteus Infection Treatment (U.S.P. 3,172,811)

A method for the treatment of Proteus infection which comprises administering to infected hosts an effective dose of 1-methyl-3-carboxy-6,7-dimethoxy-4-(1H)-quinolone.

(III) Method of Treating Wounds (U.S.P. 3,172,808)

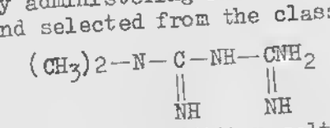
A method of treating wounds, comprising applying to the surface of a wound a synthetic resin in foamy condition, the resin being selected from the group consisting of urea formaldehyde, melamine formaldehyde, and mixtures thereof, said application to the wound being carried out before said foamy resinous material is permanently hardened.

PMT/B 41-5 (I) Treatment of Vascular Diseases with 2-Aminoethanol-1-Nitrate Salt of p-Toluene Sulfonic Acid (U.S.P. 3,065,138)

A method of treating human beings suffering from angina pectoris and similar diseases of vascular origin which comprises administering to said human beings small doses of the stable, non-hygroscopic, non-volatile 2-aminoethanol-1-nitrate salt of p-toluene sulfonic acid.

(II) Process for the Oral Treatment of Diabetes (U.S.P. 3,164,901)

A method of continuously treating diabetes of human beings which comprises orally administering initially a daily dosage of about 1 to 4 grams of a compound selected from the class consisting of



and its non-toxic acid addition salts, and thereafter orally administering a daily adjusted maintenance dose of said compound.

(to be cont'd.)

(cont'd.)

(III) Process for Treating Air Sac Disease
(U.S.P. 3,171,781)

A process for treating air sac disease in fowl which comprises introducing into the intestinal tract of the bird infected with the causative agent of said disease a poultry feed containing minute amounts of vitamin A and guaiacol.

REFERENCE TEXTS

産業技術翻訳技能教育審議会
通信教育指導委員会

日本文「練習課題」に対する英訳の一例であります。産業技術翻訳技能教育審議会は，「標準答案」または「標準翻訳」など，「標準」という語を使用することを禁じておりますので，通信教育指導委員会は，同審議会の意向を汲んで，単に REFERENCE TEXT(S) としました。ここに掲げられている英文は，優れた翻訳の一例でありますから，受講者自身が行なった翻訳と照合して研究するために使用されることを望みます。

PMT/B 42 Limiting or Non-Limiting Language in Claims --- Mechanical

PMT/B 42-1 Cutting Tool (U.S.P. 3,518,737)

Apparatus for supporting an elongated cutting tool insert having oppositely disposed precision ground cutting surfaces, the apparatus comprising: a body portion; shim plate supporting means permanently affixed to said body portion for supporting a cutting insert, said shim plate supporting means having an insert receiving groove formed therein and said shim plate supporting means being harder than said body portion; an elongated slot in said body portion parallel to said insert receiving groove; cylindrical stop means extending from said body portion across said insert receiving groove transverse to said groove to position a cutting insert in said groove; adjustable clamping means removably attached to said body portion, a portion of said clamping means extending over said shim plate supporting means and cooperating with the groove in said shim plate supporting means to hold a cutting insert during a machining operation, said clamping means having a rib engaging said slot in said body portion; and fastener means for securing said clamping means to said body portion, said fastener means including a washer member adapted to engage said clamping means and having a frustoconical inner surface, and a threaded element releasably connected to said body portion, said threaded element having a frustoconical surface mating with said frustoconical surface on said washer member.

PMT/B 42-2 Temperature Indicating Device (U.S.P. 3,518,961)

A temperature indicting device for determining the temperature developed in a radioactive system, said device comprising an elongated sealed capsule fabricated from molybdenum, a fusible member contained within said capsule, a pin fabricated from tungsten disposed in said fusible member said fusible member being inert with respect to molybdenum and tungsten and having a preselected melting point in the range of from about 125° centigrade to about 950° centigrade, said pin having a higher melting point than said fusible member, said pin having a specific density of greater magnitude than the specific desity of said fusible member when said fusible member is in its liquid state, said capsule being retained in axially vertical position when in operation and said pin being retainable at the top end of the capsule by said fusible member when said fusible member is in its solid state, a void space at the bottom end of said capsule, and said pin being movable by a force of gravity to said bottom end of said capsule when said fusible member changes from its solid state to its liquid state, and radiographic means disposed adjacent said capulse for radiographically viewing the position of said pin, thereby to determine whether said preselected temperature has been exceeded.

PMT/B 42-3 Remote Control Assembly Having an All Metal Casing (U.S.P. 3,518,896)

1. A motion transmitting remote control assembly comprising: a first metal strip wrapped in abutting convolutions to form a monocoil, said strip having a first surface that is flat and a second surface that is continuously arcuate; a plurality of lay wires wrapped on said monocoil, a second metal strip wrapped on said lay wires to form a composite structure; and a core element slidably disposed within said monocoil engaging said second surface, said first metal strip being D shaped in cross-section and the arcuate portion of said D shape extends toward the longitudinal axis of said monocoil.
2. A motion transmitting remote control assembly according to claim 1 wherein said second surface merges with said first surface.
3. A motion transmitting remote control assembly according to claim 1 wherein said first metal strip is composed of a softer metal than said core element.
4. A motion transmitting remote control assembly according to claim 1 wherein said first metal strip is wrapped with a short lead relative to said lay wires and said second metal strip.

PMT/B 42-4 Self-Closing Hinge (U.S.P. 3,518,716)

A self-closing hinge assembly for the door of an enclosure, such as a refrigerator, comprising a bracket secured to the enclosure and a housing secured to the door, said housing having end walls with aligned openings therein, a stationary shaft extending through said openings and secured at one end to said bracket, said shaft having a stepped cylindrical surface with reduced ends, a stationary cam member in said housing abutting one end wall and receiving the stepped end of the shaft for rotation relative thereto, a movable cam member in said housing encompassing said shaft, means on said shaft and said movable cam member preventing relative rotation thereof but allowing axial movement of said movable cam member relative to said shaft including a pair of longitudinally extending oppositely disposed flattened surfaces on said shaft, and said movable cam member having a central passage therethrough complementary to the cross section of the shaft, a compression spring in said housing encompassing said shaft with its opposite ends engaging the opposite end wall and said movable cam member to yieldably bias said movable cam member toward said stationary cam member, and complementary coming surfaces on said stationary and movable cam members, each having a low point, diametrically opposite high points and a generally flat surface extending through an arc of approximately 180°.

PMT/B 42-5 Method of Mounting Bearings (U.S.P. 3,518,747)

1. A method of mounting first and second bearings including the steps of; mounting the first and second bearings in two bearing supporting members; and distorting at least one of the bearing supporting members to impose bearing retaining stresses on each bearing.

PMT/B 42-5 (cont'd.)

2. The method of mounting bearings according to claim 1 wherein the step of mounting a first bearing in two bearing supporting members and of mounting a second bearing in the bearing supporting members both include the step of forming bearing receiving holes in the bearing supporting members.
3. The method of mounting bearings according to claim 1 further including the step of securing the bearing supporting members in the distorted condition.
4. The method of mounting bearings according to claim 3 wherein the step of securing the bearing supporting members in the distorted condition includes the step of fixing the bearing supporting members one to the other while the bearing supporting members are in the distorted condition.
5. The method of mounting bearings according to claim 4 wherein the step of distorting the bearing supporting members includes the step of bending the bearing supporting members with respect to each other.

REFERENCE TEXTS

産業技術翻訳技能教育審議会
通信教育指導委員会

日本文「技術論題」に対する英訳の一例であります。産業技術翻訳技能教育審議会は、「標準答案」または「標準翻訳」など、「標準」という語を使用することを禁じておりますので、通信教育指導委員会は、同審議会の意向を汲んで、単にREFERENCE TEXT(S)としました。ここに掲げられている英文は、優れた翻訳の一例でありますから、受講者自身が行なった翻訳と照合して研究するために使用されることを望みます。

PMT/B 43 Summary Statement of Invention --- Chemical Claims (U.S.P. 3,122,515)

PMT/B 43-1 Process for the Preparation of Vinyl Chloride Polymer Foams

The process of the invention comprises the steps of dissolving in vinyl chloride polymer a member selected from the group consisting of an organic gas and a mixture of an organic liquid and a g s which is soluble in said organic liquid, and forming a foamable, solid, homogeneous mass of vinyl chloride polymer in which there is dissolved either an organic gas or an organic liquid/gas mixture; and heating the thus formed foamable, solid, homogeneous mass to a temperature in the range of from about 75°C. to about 125°C., and thereby causing said solid mass to expand and form a foamed structure.

PMT/B 43-2 Corrosion Inhibitor for Hydraulic Fluids (U.S.P. 3,342,736)

1. A condensate of an alkylene glycol containing 2 to 6 carbon atoms and a pentaborate salt of a metal selected from the group consisting of alkali and alkaline earth metals, said condensate being made by heating at about 100-200°C. a mixture of said borate salt with at least about 20 molar equivalents of said alkylene glycol until at least one mole of water of reaction per atom of boron in the borate has been removed.

5. A corrosion-inhibited hydraulic fluid consisting essentially of a base fluid, and, as a corrosion inhibitor therefor, an effective amount of the condensate defined in claim 1, said base fluid consisting essentially of at least one member of the group consisting of alkylene glycols, alkyl ethers of alkylene glycols, polyglycols, alkyl ethers of polyglycols, fatty acid esters of polyglycols, castor oil and lower alkanols.

PMT/B 43-3 Expandable Polymers (U.S.P. 3,342,760)

A process for impregnating previously formed polymeric styrene particl. with a normally liquid hydrocarbon blowing agent comprising: suspendi , in a closed reactor, solid particles in a solution consisting of a su ending aid, water and a id blowing agent, heating said solution to a temperature of about 90°C. to brin said solution to the critical pressure of said reactor and maintaining said critical pressure for at least about two hours, but less than four hours until said particles are impregnated by continually raising the temperature of said solution to elevated temperatures between 90 and 120°C.

PMT/B 43-4 Process for the Electrodeposition of a Decorative Corrosion Resistant Nickel-Chromium Coating and Products Thereof (U.S.P. 3,342,506)

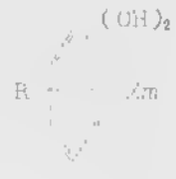
A metal article having thereon a corrosion resistant coating which com rises a coating of electrodeposited nickel containing uniformly dis ersed, fi ely divided carbon particles of a size on the order of 20 to 100 A., and an outer coating of electrodeposited chromium on said nickel.

.../B 43-4 (cont'd.)

Electrolytic Polishing of Stainless Steel (U.S.P. 3,342,711)
A method for polishing stainless steel which comprises electrolyzing a solution consisting essentially of a minor proportion of (a) at least one member selected from the group consisting of gluconic acid, alkali and alkaline earth metal salts thereof and picoline, and (b) ethylene glycol, and a predominant proportion of concentrated aqueous phosphoric acid and concentrated aqueous sulfuric acid, with the metal to be polished constituting the anode.

MT/B 43-5 Carbon Black Product and Method of Preparation Thereof (U.S.P. 3,342,554)
A process for making carbon black comprising (a) electrically inducing heating of a stream of inert gas to a thermal plasma state of at least about one atmospheric pressure wherein from about 10 to about 50% of said gas is in an ionized state, thereby forming a zone suitable for carrying out high temperature reaction and (b) continuously feeding a fluid hydrocarbon into said zone thereby causing the decomposition of said hydrocarbon to form carbon black.

Electrolytic Recording Medium Containing a Halogenated Polyhydric Phenol (U.S.P. 3,342,705)
An electrolytic recording medium comprising an impregnated sheet containing in an electrolytically conducting solution a halogenated polyhydric phenol in which at least two of the phenolic hydroxyl groups are ortho to each other and selected from the class consisting of:



where R is selected from the group consisting of H, OH and CH_3; X is halogen, n is 1 or 2; and $(OH)_2$ denotes two ortho phenolic hydroxyl groups.

REFERENCE TEXTS

産業技術翻訳技能教育審議会
通信教育指導委員会

日本文「翻訳課題」に対する英訳の一例であります。産業技術翻訳技能教育審議会は、「標準答案」または「標準翻訳」など、「標準」という語を使用することを禁じておりますので、通信教育指導委員会は、同審議会の意向を汲んで、単にREFERENCE TEXT(S)としました。ここに掲げられている英文は、優れた翻訳の一例でありますから、受講者自身が行なった翻訳と照合して研究するために使用されることを望みます。

PMT/B 44 Protection of Combinations --- Electrical Claims

PMT/B 44-1 Apparatus for Controlling Conveying Systems and the Like (U.S.P. 3,484,655)

1. Control apparatus comprising;
(a) condition responsive means adapted to temporarily complete an electric circuit upon each occurrence of a prescribed condition;
(b) transducer means adapted to be connected to a suitable source of power in a first configuration to provide a first activating impulse and to be connected to the source of power in a second configuration to provide a second activating impulse; and
(c) relay means connected to the source of power, to said condition responsive means through said electric circuit, and to said transducer means and including a plurality of relays each having a plurality of contacts connected to operate in one of a predetermenied series of sequences each time the condition responsive means operates for alternately connecting said transducer means to the source of power in said first configuration and for connecting said transducer means to the source of power in said second configuration each time said electric circuit is completed a predetermined number of times.
2. Control apparatus as set forth in claim 1 wherein the transducer means includes a first and second solenoid connected so that said first solenoid is energized and said second solenoid is deenergized in the first configuration and said first solenoid is deenergized and said second solenoid is energized in said second configuration.

PMT/B 44-2 Electromechanical Oscillators (U.S.P. 3,519,856)
An electromechanical oscillator comprising a tuning fork having straight tines of equal length, a single permanent magnet lying between the tines of the fork adjacent their ends, signal and drive coils surrounding at least one tine of the fork, an escape wheel mounted to rotate about an axis perpendicular to a centre line lying between the tines of the fork and parallel thereto, the esaape wheel having around one face thereof a continuous wavy magnetic track with an even number of waves, and projections on the ends of the tines of the fork made of a magnetic material of high permeability and low retentivity so placed that their ends are close to diametrically opposite points on the wavy magnetic track, whereby, during oscillation of the tines of the fork, a part of the magnetic flux of the magnet passes through the tines of the fork to provide inductive coupling with the coils for maintaining oscillation of the tines and the other part of the magnetic flux passes through the wavy magnetic track to cause rotation of the escape wheel.

PMT/B 44-3 Rise Time/Fall Time Pulse Sensor (U.S.P. 3,519,849)

1. In combination in a system for measuring rise time of a signal voltage wave front, said system comprising a signal input terminal, a first and a second amplifier with input circuits connected in parallel to said signal input terminal, a bistable flip-flop with set and reset control circuits connected, respectively, to the output circuits of said first and second amplifiers, a pulse width measuring means coupled to the output of said flip-flop, and two threshold control means coupled, respectively, in said first and second amplifiers for producing, successuvely, set and reset voltage in the output circuits of said amplifiers as the voltage of said wave front attains two different voltage levels so that the duration of the flip-flop output pulse as determined by said pulse width measuring means is a function of the time interval between said set and reset voltages.

2. In the measuring system defined in claim 1, said threshold control means each comprising a transistor amplifier, means for applying bias voltages to the electrodes of each transistor amplifier for establishing predetermined voltage threshold above which the incoming signal must rise to produce an output signal.

PMT/B 44-4 Low Power Analog Switch (U.S.P. 3,519,852)

1. An analog switch comprising:

(a) semiconductor switch means including an input, first and second electrodes and operable to activate in response to a proper control signal applied to said input electrode;

(b) means for connecting a source of an log voltage to said first electrode;

(c) an input means for the application of first and second input signals;

(d) a bias terminal for the application of bias potential;

(e) first current conducting switch means connected between said input electrode and a point of reference potential and operable to conduct in response to the provision of said first input signal;

(f) voltage comparison means including first and second sections commonly connected together at a circuit point;

(g) means connecting said first electrode to said first section for establishing a voltage at said circuit point, dependent upon said analog voltage;

(h) means connecting said input electrode to said second section for governing conduction of said second section in accordance with the difference in voltage between said input electrode and said circuit point;

(i) means for connecting said first and second sections to said bias terminal; and

(j) second current conducting switch means connected between said circuit point and a point of reference potential and operable to conduct in response to said second input signal for allowing circuit conduction of said voltage comparison means.

PMT/B 44-5 Automatic Precipitation Light Control for Vehicles
(U.S.P. 3,519,837)

2. An automotive vehicle having an electrical windshield wiper assembly, the vehicle including forward and rearward lights, a control system comprising first switch means actuatable in response to operation of the wiper assembly, second switch means having an output, the second switch means responding to the first switch means for producing a voltage at said output, means adapted to connect the forward and rearward lights to said output for causing energization of the lights upon the occurrence of a voltage at said output, whereby the vehicle lights are automatically lit in response to the operation of the windshield wiper assembly thereby promoting safer operation of the vehicle during precipitation conditions.

3. The system set forth in claim 2 wherein said second switching means include an electromagnetic assembly having switch contacts connected between the voltage source and the vehicle lights, the contacts being closable in response to actuation of the first switch means.

4. The system set forth in claim 3 wherein the electromagnetic assembly includes two relays having individual contact connected between the voltage source and the forward and rearward vehicle lights respectively.

5. The system set forth in claim 2 wherein the first switch means include a switch section mechanically coupled to the wiper switch, whereby actuation of the wipe switch causes simultaneous energization of the wipers and the vehicle lights.

REFERENCE TEXTS

産業技術翻訳技能教育審議会
通信教育指導委員会

日本文「練習課題」に対する英訳の一例であります。産業技術翻訳技能教育審議会は、「標準答案」または「標準翻訳」など、「標準」という語を使用することを慎しておりますので、通信教育指導委員会は、同審議会の意向を汲んで、単にREFERENCE TEXT(S)としました。ここに掲げられている英文は、優れた翻訳の一例でありますから、受講者自身が行なった翻訳と照合して研究するために使用されることを望みます。

PMT/B 45 Functional Statemente---Mechanical Claims

PMT/B 45-1 Fuel Injection Pump for Internal Combustion Engines (U.S.P. 3,161,138)

In a fuel injection pump for internal combustion engines having a casing consisting of a first and a second part, fuel inlet conduits, fuel outlet conduits, a shaft rotatably mounted in said casing and a stationary cam ring disposed in the casing and having a plurality of camming surface portions cooperating with roll means, the combination comprising a central section in said shaft which is rotatable therewith, said central section forming a pump body, an interior and an exterior piston in radial and coaxial arrangement, said pistons being slidably disposed in said pump body, a pump operating space between said pistons, said roll means comprising a roll ram and roll each fixed to the ends of said pistons, said rolls being adapted to cam on the surface portions of said stationary cam ring upon rotation of said shaft and actuate said pistons, bore means in the interior piston and bore means in the exterior piston, and return passage means leading from said pistons through said casing and being connected back to said fuel inlet means, said bore means being adapted to be brought in opening connection with said return passage, thereby allowing fuel to return from said pump operating space through said return passage out of said casing.

PMT/B 45-2 Ball Screw Mechanism (U.S.P. 3,161,073)

A ball screw mechanism comprising a screw member and a nut member each having a helical groove which grooves together define a helical passage, a train of balls in said passage permitting transmission of force between the members, an opening formed in the wall of said nut member so as to extend at an inclination relative to the axis of the mechanism between the ends of less than one helical groove convolution, and a ball return member fixedly mounted in said opening so as to be disposed within the confines of the outer diameter of said nut and having a wall portion defining a ball return passage for transferring the balls between said ends and over an intervening screw crest whereby said ball return member and said less than one helical groove convolution together define an endless path for the train of balls, said ball return member being disposed closely adjacent said intervening screw crest and said wall portion having an opening therein extending substantially along the length of the ball return member in a radially inner portion thereof facing said screw member, said opening being less wide than the diameter of said balls whereby when due to gravity the balls are urged toward said screw the edges of said wall portion adjacent said opening will suspent the balls out of contact with the crest of said intervening screw thread while yet permitting them to move in a path closely adjacent said crest as the balls are directed thereover.

PMT/B 45-3 Measuring Apparatus (U.S.P. 3,161,068)
Apparatus for varying the ratio of input to output motion of a lever of the first class, comprising a bearing member forming a fulcrum about which the lever is rotated, a sector pulley operably connected for applying a span adjusting movement with respect to an end portion of the lever to which an input motion is applied, a zero adjusting stud rotatably connected by way of a friction drag member to a flat side portion of the sector pulley, a drive cord of a preselected length, one end portion of the cord being adapted to have the input motion applied thereto, said drag member being in physical frictional contact with the sector pulley and the stud to enable the stud to be rotated in a clockwise or counter-clockwise direction thereon to any one of a number of fixed angularly displaced positions, the other end portion of the cord having a surface thereof in engagement with an outer peripheral grooved surface of the sector pulley which has a terminal part thereof connected to an outer peripheral portion of the stud for winding and unwinding thereon to change the unwound active length of the drive cord when the stud is rotated between any one of the fixed angularly displaced positions without altering the distance between the bearing member and the surface of the cord that is in engagement with the grooved surface of the sector pulley, and a biasing means having one of its end portions fixed to a stationary member andanother extensible end portion pivotally connected formovement with the lever.

PMT/B 45-4 Machine Tool Turret (U.S.P. 3,161,084)
A machine tool-turret comprising a base, a core supported by said base, a turret body rotatably and slidably mounted on said core for movement with respect to an axis passing through said core, said core and turret body having respective conical matable surfaces and planar matable surfaces, arranged such that upon relative sliding movement of the body on the core in opposite directions the matable surfaces are respectively engaged and disengaged, the planar matable surfaces being arranged substantially perpendicular to the directions of sliding movement of the turret body to limit the degree of engagement between the conical matable surfaces of the core and said body, said turret body including a portion having an external polygonal contour, a cylindrical recess being provided in the latter portion in coaxial relation, taper pins supported in said portion of said turret body at the corners thereof and projecting internally into the cylindrical recess, and means projecting within said recess and supported in fixed position therein for engaging respective of said taper pins upon rotation of the turret body for angular positioning of the turret body between particular positions, the latter means comprising a substantially fixedly supported member including a resilient portion which engages the taper pins.

PMT/B 45-5 Motor Control System (U.S.P. 3,161,075)
In a control system for a prime mover and a transmission that reversibly connects the prime mover with a power output member, the combination of:
a first electrically responsive means to adjust the transmission to drive said output member in one direction;
a second electrically responsive means to adjust the transmission to drive said output member in the opposite direction;
a third electrically responsive means to adjust said transmission to disconnect the output member from the prime mover;
a control member for the transmission movable in one respect from a neutral position through a range of positions to cause the transmission to drive said output member in said one direction and movable in a second respect from a neutral position through a range of positions to cause the transmission to drive said output member in the opposite direction;
means to increase the power output of said prime mover in response to movement of said control member in either of its respects away from neutral position beyond a predetermined point;
a first switch means responsive to said control member for actuation when the control member moves away from neutral position in said first respect;
a second switch means responsive to the control member for actuation when the control member moves away from neutral position in said second respect;
an E.M.F. source; and
circuitry to connect said E.M.F. source to said first electrically responsive means in response to actuation of said first switch, to connect the E.M.F. source to the second electrically responsive means in response to actuation of said second switch means and to connect the E.M.F. source to said third electrically responsive means when neither of the two switch means is actuated.

REFERENCE TEXTS

産業技術翻訳技能教育審議会
通信教育指導委員会

日本文「練習課題」に対する英訳の一例であります。産業技術翻訳技能教育審議会は、「標準答案」または「標準翻訳」など、「標準」という語を使用することを禁じておりますので、通信教育指導委員会は、同審議会の資料を汲んで、単にREFERENCE TEXT(S)としました。ここに掲げられている英文は、優れた翻訳の一例でありますから、受講者自身が行なった翻訳と照合して研究するために使用されることを望みます。

PMT/B 46 Product by Process Claims---Chemical Claims

PMT/B 46-1

(I) Epoxy Modified Silicones (U.S.P. 3,324,080)

An epoxy silicon compound obtained by ester interchange between an alcoholic hydroxyl group in

(A) a partial glycidyl ether of a polyhydric alcohol, having one unreacted alcoholic hydroxyl group, selected from the group consisting of the monoglycidly ether of ethylene glycol, the monoglycidyl ether of 1.4-butanediol, the diglycidyl ether of trimethylol-propane and the diglycidyl ether of hexanetriol, and an alkoxy group in

(B) an alkoxy silicon compound selected from the group consisting of alkoxy siloxanes and alkoxy silanes, said alkoxy silicon compound being one which:

(1) contains only carbon, hydrogen, oxygen and silicon,
(2) is free of acidic hydroxyl groups,
(3) is free of hydrogen-silicon linkages, and
(4) has only hydrocarbon substituents, at least one of which is an alkoxy group, alkoxy groups being the only substituents of said alkoxy silicon compound which are reactive with alcoholic hydroxyl groups.

(II) Foamed Epoxy Resin Compositions (U.S.P. 3,324,053)

A foamed epoxy resin composition comprising the reaction product of at least one epoxidized polyolefin resin, a hydrocarbon blowing agent, a curing agent selected from the group consisting of trinaphthyl borate, triphenyl borate and substituted triphenyl borate, said substituents selected from the group consisting of alkyl radicals of from 1 to 20 carbon atoms and halogen radicals, and at least one material selected from the group consisting of alkylene glycol boric anhydrides and alkylene glycol biborates in which said alkylene radicals are of from 2 to 4 carbon atoms in length and contain a total of from 2 to 20 carbon atoms.

PMT/B 46-2

(I) Graft Copolymers of Butadiene, Acrylonitrile and Diethylenically Unsaturated Monomers onto Vinyl Chloride Polymers (U.S.P. 3,327,022)

A graft polymer which comprises the graft polymer obtained by reacting a polyvinylchloride with a monomer mixture composed of about 20 to 80% by weight of butadiene and about 80 to 20% by weight of acrylonitrile monomer, and a member of the group of vilyl and vinylidene monomers consisting of divinylbenzene, divinylether, monoalkyleneglycol dimethacrylate, polyalkyleneglycol dimethacrylate, monoalkyleneglycoldiacrylate, polyalkyleneglycol diacrylate, allyl acrylate and allyl methacrylate, the proportions of said member with respect to the butadiene and the acrylonitrile being up to 10% by weight, said graft polymer containing grafted branch chains derived from said mixture equaling 40 to 60% thereof by weight.

PMT/B 46-2 (cont'd.)

(II) Catechol-Phosphorus Sulfide Reaction Product and Amine Salts Thereof (U.S.P. 3,327,024)

A salt of the product formed by heating to refluxing temperature two mole proportions of a catechol and one mole proportion of phosphorus pentasulfide and an amine consisting of carbon, hydrogen and nitrogen and containing at least one primary or secondary amine group and from 1 to about 40 carbon atoms per molecule.

(III) Lithium Phosphate Catalyst (U.S.P. 3,325,245)

A trilithium phosphate catalytically active for the selective isomerization of aliphatic hydrocarbon 1.2-epoxides to the corresponding allyl alcohols prepared by rapidly contacting, with agitation, an aqueous solution of lithium dihydrogen phosphate at a temperature of about -10° to about $+15^{\circ}$C. with an aqueous solution of an equivalent amount of lithium hydroxide, thereby providing a trilithium phosphate precipitate, separating and collecting said trilithium phosphate precipitate, and drying said precipitate at a temperature of not greater than 300°C.

PMT/B 46-3

(I) Copolymer Emulsion of Lower Alkyl Esters and Dialkyl Esters (U.S.P. 3,324,056)

1.(a) from 60 to 90% of a lower aliphatic ester, having terminal ethylenic unsaturation, of a lower saturated aliphatic monocarboxylic acid,

(b) from 5 to 25% of a C_1-C_8 alkyl ester of an alpha, beta-ethylenically unsaturated lower aliphatic monocarboxylic acid, and

(c) from 5 to 15% of a di-(C_2-C_8 alkyl) ester of at least one dicarboxylic acid selected from the group consisting of maleic and fumaric acids; and

2. From 2 to 12% by weight, based on the total weight of the aforementioned copolymerizable ingredients, of a water soluble nonionic surfactant.

3. An emulsion as in claim 1 which additionally contains a small amount of a hydrophilic, nonionic, protective colloid.

4. An emulsion as in claim 2 wherein the protective colloid is a water-soluble hydroxyethyl ether of cellulose.

(II) Ester-Amides of Alkenyl Succinic Anhydride and Diethanolamine as Ashless Dispersants (U.S.P. 3,324,033)

1. An ashless dispersant ideally suited for use in lubricating oil, said dispersant being the reaction product of diethanolamine and an alkenyl succinic anhydride wherein the alkenyl substituent is a polybutene having a molecular weight of from about 700 to 1100, said reaction product being further characterized in that from 0.66 to 1.5 moles of diethanolamine are reacted per mole of alkenyl succinic anhydride and the reaction is conducted at a reacting temperature for a time such that the resulting product has an ester-amide ratio of from 0.5 to 1.1

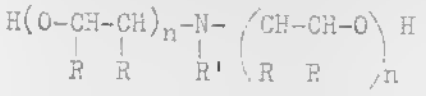
2. A lubricating oil composition containing a dispersing quantity of the ashless dispersant of claim 1.

PMT/B 46-4 Hydrophobic Polymers Coated with a Hydrocarbon Polyisocyanate Reacted with a Dihydroxy Organic Tertiary Amine (U.S.P. 3,325,306)

A unitary member comprised of a hydrophobic polymer structure and a highly adherent coating in direct contact with an unaltered surface of the structure said coating consisting essentially of a compound derived by the reaction of

(A) a hydrocarbon isocyanate compound selected from the group consisting of hydrocarbon diisocyanate compounds and hydrocarbon triisocyanate compounds said compound being reacted in an amount of from about 1.5 to about 2.0 mole proportions when it is a triisocyanate and from about 2.0 to about 3.0 mole proportions when it is a diisocyanate and

(B) one mole proportion of an amine compound having the structural formula



wherein

n is an integer of 1 through 10;

R is selected from at least one of the group consisting of hydrogen, methyl, and ethyl; and R' is selected from the group consisting of alkyl containing from 1-18 carbon atoms, cycloalkyl containing from 6-10 carbon atoms, aryl, benzyl, R"CO --- wherein R" is selected from the group consisting of alkyl containing from 1-18 carbon atoms, cycloalkyl containing from 6-10 carbon atoms, aryl, and benzyl, and $R"'SO_2$---

wherein R"'is selected from the group consisting of alkyl containing 1-6 carbon atoms, phenyl, and naphthyl.

PMT/B 46-5

(I) Polymeric Blends Containing a Graft Copolymer of Vinyl Chloride onto Chlorinated or Chlorosulfonated Polyolefin (U.S.P. 3,322,857)

A composition of matter comprising: (1) 40-90 parts by weight of a graft blend prepared by polymerizing 60-98% by weight of monomeric material with 2-40% by weight of a chlorinated polymer of an alpha-monoolefin of about 2 to 3 carbon atoms; said monomeric material comprising 80-100% by weight of vinyl chloride and 20-0% by weight of other ethylenically unsaturated monomers copolymerizable therewith, (2) 5-50 parts by weight of a rubber-like copolymer of acrylonitrile and a conjugated diene and (3) 5-40 parts by weight of a chlorinated polymer of an alpha-monoolefin of about 2 to 3 carbon atoms.

(II) Sulfur Substituents of Propene/Butene Copolymers as V.I. Improvers (U.S.P. 3,322,669)

Copolymers consisting essentially of two olefins of the group consisting of ethylene, propylene and 1-butene, wherein one of the olefins is present in from 15 to 85 mole percent, wherein said copolymers are of a molecular weight in the range of 1 to 20 X 10^5 and are prepared by using a Ziegler catalyst comprising in combination an organo-aluminum compound and a titanium or vanadium halide, and wherein sulfur, as sulfide linkages

FMT/B 46-5 (cont'd.)
from the copolymer to organic radicals, is present in an amount of from 2 to 25 weight percent, the organic radicals being selected from the group consisting of hydrocarbyl of from 1 to 20 carbon atoms, carbonalkoxy substituted hydrocarbyl of from 1 to 20 carbon atoms, hydroxy substituted hydrocarbyl of from 1 to 12 carbon atoms, amino-hydrocarbyl radicals of from 1 to 20 carbon atoms and having from 1 to 2 amino groups and acyl radicals of the formula:

$$T\overset{\overset{X}{\|}}{C}S$$

wherein X is chalcogen of atomic number 8 to 16, and T is amino.
2. An oil of lubricating viscosity having a composition according to claim 1 in an amount sufficient to provide viscosity index improvement.

REFERENCE TEXTS

産業技術翻訳技能教育委員会
通信教育指導委員会

日本文「練習課題」に対する英訳の一例であります．産業技術翻訳技能教育委員会は，「標準答案」または「標準翻訳」など，「標準」という語を使用することを禁じておりますので，通信教育指導委員会は，同委員会の意向を汲んで，単にREFERENCE TEXT(S)としました．ここに掲げられている英文は，任れた翻訳の一例でありますから，受講者自身が行なった翻訳と照合して研究するために使用されることを望みます．

PMT/B 47 Use of Block Diagrams as Basis of Claims---Electrical

PMT/B 47-1 Ignition System for Internal Combustion Engine (U.S.P. 3,161,803)

In an ignition system for an internal combustion engine having a plurality of spark plugs and a rotatable distributor communicating therewith, a high voltage pulse generator comprising a conductive disk rotatable with the distributor and having a plurality of circumferentially-spaced slits radially extending therein from a medial annulus to the periphery thereof, magnetic field inducing means laterally spaced from one side of said disk and registering with the annular circle developed by the slits, magnetic pick-up means laterally spaced from the other side of said disk and inductively coupled with said inducing means as each slit is rotated therebetween, and means applying electrical pulses induced in said pick-up means to the distributor, said magnetic field inducing means including both a permanent magnet and independently thereof a coil having high frequency electrical oscillations applied thereto, said electrically oscillating coil acting as a source for supplying voltage at low engine speed and said magnet being operative for supplying voltage at high engine speed, whereby a synchronized high voltage pulse of constant amplitude at all engine speeds will be delivered to the spark plugs at regular intervals without the necessity of breaker points.

PMT/B 47-2 Pulse Converter Control Apparatus (U.S.P. 3,161,774)

Control apparatus comprising; Geiger tube condition sensing means sensitive to a given condition and providing a continuous series of short time duration signal pulses upon being subjected to the given condition, said Geiger tube having an inherent background count in the absence of the given condition to provide infrequent signal pulses; a first and a second transistor each having input electrodes and output electrodes, a capacitor, circuit means connecting said capacitor in series with the input electrodes of said first and second transistors, the input electrodes of said first and second transistors being connected in a reverse relation such that a charging current for said capacitor is effective to render one of said transistors nonconductive and a discharging current for said capacitor is effective to render the other of said transistors nonconductive, further transistor means connected to be controlled jointly by the output electrodes of said first and second transistors to provide a continuous output signal so long as one or the other of said first and second transistors is in a non-conducting state; circuit means connecting said capacitor to said Geiger tube to provide a charging current therefor for each of said signal pulses, said capacitor discharging during the time interval between said signal pulses; and further means connected to be controlled by

PMT/B 47-2 (cont'd.)
said further transistor means, said further means being continuously controlled only in the event that the signal pulses provided by said Geiger, tube are spaced by no more than a given time interval as determined by said capacitor to thereby discriminate against the inherent background count of said Geiger tube.

PMT/B 47-3 Control Device and Circuit for Electric Bedcovers (U.S.P. 3,161,806)
In an alternating current electrically protective control circuit, a relay having a U-shaped core and an armature movable toward and away from said core between open and closed positions, means biasing said armature away from said core to its open position, a work circuit energized when said armature is engaged against said core in closed position, a permanent magnet associated with said core to provide a magnetic force sufficient to maintain said armature against said core and insufficient to move said armature from open to closed position, a pair of alternating current windings on said core arranged to produce simultaneously equal and opposite alternating magnetic flux while said armature is in the closed position and while operation is normal, an impedance circuit associated with each of said windings, means to modify the value of at least one element in one of said impedance circuits upon an abnormal condition, whereby a net alternating flux is produced in said core to reduce magnetic flux in said core during an alternation to a point at which said biasing means moves said armature to an open position.

PMT/B 47-3 Alternating Current Motor (U.S.P. 3,161,814)
An induction machine comprising a first slotted structure, a primary winding accommodated in slots of said first slotted structure, a second slotted structure movable with respect to said first slotted structure, a secondary winding accommodated in the slots of said second slotted structure and electromagnetically coupled to said primary winding, said primary winding consisting of at least first and second sets of coils which overlap so that the magnetomotive force in at least some of the slots of said first slotted structure is generated by the addition of the magnetomotive forces caused by current flow in the conductors of coils of said first and second set, each of said sets of coils being so wound that the magnitude of the current flow in the conductors in the slots of said first slotted structure due to the coils of one set is a single-valued function of the distance along the arc of said first slotted structure occupied by said one set of coils, a three-phase alternating current supply and switching means for connecting different phases of the current supply in different combinations to corresponding coils of said sets of coils to enable different predetermined values of the average phase difference between the currents in adjacent slots to be obtained.

PWT/B 47-5 Feed-Back Control System (U.S.P. 3,161,820)
A feed-back control system; said feed-back control system comprising a first and second device operable to drive a common output system, a first and second switching means for said first and second device for selectively connecting and disconnecting said first and second device to said common output system, a regulator means connected to said first and second device and said output system for adjusting the output of said first and second devices in accordance with a predetermined parameter of said output system, a regulator control means for controlling the level of operation of said first and second devices, and a regulator level control means; said regulator level control means being operable to change said level of operation of said regulator independently of said regulator control means from a first level to a second level; said regulator level control means being operatively connected to said first and second switching means; said regulator level control means changing said level of operation of said regulator to said first level when only one of said first and second devices is connected to said output system, and to said second level when both of said first and second devices are connected to said output system.

REFERENCE TEXTS

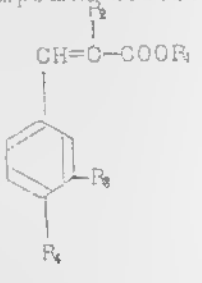
産業技術翻訳技能教育委員会
通信教育指導委員会

日本文「特許明細書」における表題の一例であります。産業技術翻訳技能教育委員会は、「技術資料」または「特許翻訳」など、「標準」という語を使用することを避けておりますので、通信教育指導委員会は、同委員会の意向を踏まえて、単にREFERENCE TEXT(S)としました。ここに掲げられている英文は、優れた翻訳の一例でありますから、受講者自身が行なった翻訳と照合して研究するのに使用されることを望みます。

PMT/B 48 Doctrine of Equivalent

PMT/B 48-1 Diuretic Compounds and Method of Promoting Diuresis (U.S.P. 3,345,263)

The method of promoting diuresis in mammals which comprises administering to said mammals pharmacologically active dosages of a compound selected from the group having the formula



wherein R_1 represents a member selected from the group consisting of hydrogen, sodium and potassium; R_2 represents a member selected from the group consisting of hydrogen, an alkyl having up to 3 carbon atoms, halogen, phenyl, nitro substituted phenyl, and carboxyl; R_3 represents a member selected from the group consisting of hydrogen and halogen; R_4 represents a member selected from the group consisting of hydrogen and halogen, at least one of the substituents R_3 and R_4 always being a halogen.

PMT/B 48-2

(I) Dosage Unit Composition of 1-(p-Chlorophenyl)-1,2-Cyclopropanedicarboximide for Relief of Depression (U.S.P. 3,344,026)

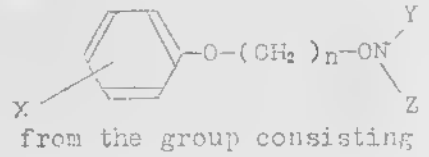
A method of inducing relief of depression in warm-blooded animals which comprises administering to warm-blooded animals suffering from depression a composition having as the essential active ingredient 1-(p-chlorophenyl)-1,2-cyclopropanedicarboximide, said composition being in an amount to produce relief of depression.

(II) Treatment of Hypertension with L-Alphamethyl-3,4-Dihydroxyphenylalanine (U.S.P. 3,344,023)

A method of treating hypertension which comprises the oral administration to a hypertensive patient of 0.1 to 5.0g. of L-α-methyl-3,4-dihydroxyphenylalanine substantially free of its D form.

PMT/B 48-3 Lowering Blood Cholesterol Levels in Warm-Blooded Animals with Phenoxyethoxy or Phenoxy-Propoxy Amine Derivatives (U.S.P. 3,342,678)

A method of reducing the blood cholesterol content of a warm-blooded animal which comprises administering internally to said animal a pharmaceutically effective amount of a compound selected from the group consisting of:



wherein X is selected from the group consisting of hydrogen, halogen and lower alkyl; n is an integer of 2 to 3; Y is selected from the group consisting of hydrogen,

REFERENCE TEXTS

産業技術翻訳技能教育委員会
通信教育指導委員会

日本文「標準訳文」に対する英語の一例であります。産業技術翻訳技能教育委員会は、「標準答案」または「標準翻訳」など、「標準」という言葉を使用することを禁じておりますので、通信教育指導委員会は、同委員会の意向を汲んで、単にREFERENCE TEXT(S)としました。ここに掲げられている英文は、「優れた翻訳」の一例でありますから、受講者自身が行なった翻訳と照合して研究するために使用されることを望みます。

PMT/B 49 Interrelationship of Elements

PMT/B 49-1(ME) Fastener Assembly with Resilient Locking Retainer (U.S.P. 3,156,281)

The combination of a member having a flange with a mounting hole therein, a bolt and washer assembly adapted to be mounted in said hole, said bolt having a head portion with a clamping surface thereon and a shank portion having a threaded portion and an unthreaded portion, said threaded portion being spaced from said head portion and being of larger diameter than said unthreaded portion, said washer being of resilient material and having a split cylindrical portion slidably mounted on said unthreaded portion, said washer having a washer member integrally interconnected to said cylindrical portion, said washer having an inner diameter less than the diameter of said threaded portion when said washer is not stressed, said washer being disposed on said shank of said bolt before said threaded portion thereof is formed, and a plurality of tab members projecting outwardly from said cylindrical portion and adapted for engaging the wall of said hole, said tab members being integrally connected to the cylindrical portion intermediate its ends with the free ends of the tab members projecting outwardly and angularly therefrom toward said washer member of said washer, said cylindrical portion being radially compressible for clearance of said wall by said tab members during assembly whereby subsequent engagement of said tab members with the wall of said hole retains said assembly in said hole, said washer member of said washer having a plurality of radially projecting teeth disposed between said bolt head and the flange of said member whereby when said bolt is tightened against said flange, said teeth prevent reverse rotation of said bolt head, said teeth being at one end of said washer and being twisted whereby they have one corner lying above and one corner lying below a plane passed through said end perpendicular to the axis of the washer.

PMT/B 49-2(ME) Cigar Feeding Device (U.S.P. 3,156,343)

Apparatus for sequentially feeding cigars to the intake station of a continuously operable wrapping machine of the type described comprising, a supporting structure, means for receiving and continuously conveying a plurality of cigars along said supporting structure, means for providing an abutment to obstruct the continuous movement of said cigars and to cause said cigars to accumulate in a row at a forward position along said supporting structure, a first member perpendicular to said supporting structure movable from beneath to engage the underside of the leading cigar, a second member perpendicular to said supporting structure movable from above to engage the upper side of the leading cigar, means for cooperatively moving said members in a path to engage the leading cigar and to carry the same to a position on said supporting structure over and forward of said abutment, said moving means being sequentially

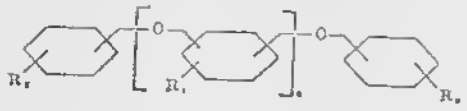
PMT/B 49-2 (cont'd.)
operable to cause said members to serially remove the leading cigar from engagement with said abutment and to place the same forward thereof.

PMT/B 49-3(EE) System for Establishing and Maintaining Synchronism in Duplex Telegraph Systems (U.S.P. 3,156,767)
In an automatic error correcting telecommunication system having at least two stations each station having a transmitter and receiver and each transmitter and receiver having an input circuit, a memory circuit connected to and controlled by its said input circuit, a distributor circuit controlling its said memory circuit, a repetition device connected and controlled by its said distributor circuit to produce a predetermined number of signals in a repetition cycle, and an output circuit, and each said receiver also having an error detector circuit connected between its said memory circuit and its said repetition device, the improvement comprising: means for establishing and maintaining synchronism between the signals of the transmitter at one station with the receiver at another station, said means comprising means in each transmitter connected to its said distributor circuit for giving an indication to each transmitted one of a given sequence of signals in a system cycle group corresponding to its position in a pattern in said group, the number of signals in said group being proportional to the number of signals in a repetition cycle, means in each receiver connected to its memory circuit for reproducing said indications, and means at each receiver connected to said error detector circuit for stopping and then restarting said reproducing means for insuring that the received signals are established and maintained in the same sequence and in the same order and same system cycle pattern in said group in which they were transmitted regardless of any interruptions or repetitions of said signals.

PMT/B 49-4(EE) Circuit-Breaking Apparatus (U.S.P. 3,156,843)
Circuit-breaking apparatus comprising a relay having an armature associated in a magnetic circuit with a first relay coil and a second relay coil, a switch including first and second switch contacts, said contacts and coils being serially connected in an electrical circuit between an electric load and a source of electrical power, said second coil being adapted to produce magnetic flux in said magnetic circuit opposing magnetic flux produced by said first coil thereby producing a net magnetic flux in said magnetic circuit, said armature adapted to be actuated when said net magnetic flux reaches a predetermined value, trip-free means for closing said switch contacts, means responsive to actuation of said relay armature to open said contacts, and a temperature-sensitive resistor device adapted to change its resistance in response to predetermined temperature change shunt-connected across said second coil thereby upon the current drawn by said load exceeding a predetermined level

PMT/B 49-4 (cont'd.)
the resistor resistance changes, thereby changing said net magnetic flux to said predetermined value, and said electrical circuit for said load is broken.

PMT/B 49-5(CS) Aromatic Ethers as Catalyst Adjuvants for Production of Crystalline Polyolefins (U.S.P. 3,317,498)
A process for the production of a normally solid polymer of a 1-olefin having a low amorphous content comprising contacting under polymerization conditions a 1-olefin having the formula $R{-}CH{=}CH_2$ wherein R is an alkyl group having 1 to 4, inclusive, carbon atoms with a catalyst consisting essentially of a halide of a Group IV-A metal and a component having the formula R_nMX_m wherein R is selected from the group consisting of alkyl, cycloalkyl, and aryl radicals and combinations thereof, X is from the group consisting of hydrogen and halogen, M is a Group III metal, n is from 1 to 3, inclusive, m is from 0 to 2, inclusive, and the sum of n and m is 3 in the presence of an aromatic ether represented by the structural formula



where n=0 to 5, x=1 to 3, R=hydrogen, alkyl, aryl, aralkyl, or alkaryl, at least one R must be other than hydrogen when n=0.

REFERENCE TEXTS

PMT/B 50 Identification---Electrical Claims

PMT/B 50-1 Means for Supplying Full Wave Rectified Current to the Field of an A.C. Generator (U.S.P. 3,161,817)

In a regulating system for a three-phase alternating current generator having a field winding, the combination of a three-phase rectifier adapted to be connected to the output of said generator and responsive to the voltage produced thereby to yield direct current voltages proportional to the output voltages thereof, a voltage reference bridge including means for providing a predetermined voltage level for comparison with said D.C. voltages, said voltage reference bridge being adapted to produce a voltage proportional to the magnitude of variation between said predetermined voltage level and said direct current voltages, a self-saturating magnetic amplifier having direct current control windings energized by said voltages conditions for modifying the degree of saturation thereof by an order of magnitude determined by the amplitude of the current therein, a constant source of alternating current, means responsive to said alternating current for supplying rectified alternating current to said magnetic amplifier having a polarity to increase saturation thereof, a full wave rectifying bridge circuit connected to said field winding, said full wave rectifying bridge circuit being supplied by said alternating current source and having normally blocked unidirectional current conducting means in each rectifying path, and means operative in response to saturation of said magnetic amplifier for unblocking said unidirectional current conducting means.

PMT/B 50-2 Fire Detector Circuit Arranged to Prevent False Warning (U.S.P. 3,161,864)

A critical-temperature-detection system comprising an imperforate electrically conductive enclosure of extended length;
heat-to-pressure transducing means for substantially increasing the pressure within said enclosure when said enclosure is externally heated;
pressure-actuated switch means actuated by the pressure in said enclosure;
an electrical warning circuit including, in series, signal means, a first source of electrical current, said switch means, and a return line from said switch means to said signal means, so that when said first switch means is closed by a pressure increase in said enclosure it causes said warning circuit to actuate said signal means; and a test circuit including, in series, a second source of electrical current, an external switch, said conductive enclosure, and said return line to said second source so that said transducing means can be electrically heated to cause closure of said pressure-actuated switch means and therefore actuation of said signal means, said return line being connected to both said conductive enclosure and to one side of said pressure-actuated switch means, andsaid first source being located between the other side of said pressure-

PAT/B 50-2 (cont'd.)
actuated switch means and said signal means, so that grounding of said enclosure or said return line cannot result in a false warning by actuation of said signal means, whereas actual closing of said pressure-actuated switch means does result in actuation of said signal means.

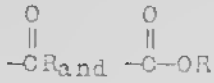
PAT/B 50-3 Data Conversion Apparatus (U.S.P. 3,161,458)
A data conversion system for transferring data stored on magnetic tape onto photographic film comprising,
(a) means for converting data stored on said magnetic tape into first electrical signals representative of said data and into second electrical signals representative of associated control signals;
(b) a cathode ray tube operable to provide an intensity modulated visual display;
(c) a first of said second electrical signals effective to intensity modulate said display, a second of said second electrical signals effective to determine the resolution of said display, and a third of said second electrical signals effective to determine the sequence in which individual portions of said display are arranged whereby said second electrical signals in combination regulate the size of said display;
(d) means for modifying said first electrical signals to serially provide deflection signals for said cathode ray tube whereby said data is displayed on the face of said tube; and
(e) photographic means controlled by said converting means for recording said displayed data in synchronism with said modifying means.

PAT/B 50-4 Automatic Electric Power Regulator (U.S.P. 3,161,819)
An automatic power regulator for providing a selected value of output power, comprising input terminals; output terminals; regulating means interconnected therebetween including one circuit which when energized increases the output power and a second circuit which when energized decreases the output power to maintain the selected value of output power; sensing means for producing a signal indicative of the magnitude and direction of the deviation of the output power from the selected value; means for amplifying the signal including a first pair of transistors connected to the sensing means for primarily amplifying the voltage of the signal and a second pair of transistors connected to receive the output of the first pair of transistors for primarily amplifying the current of the signal; an isolation transformer having a primary winding connected to receive the output of the second pair of transistors and a secondary winding; a source of pulsating direct current; a trigger circuit for each of the circuits in the regulating means, each trigger circuit comprising a pair of transistors, means for applying the pulsating direct current voltage in the emitterbase circuit of one of the transistors to normally cause conduction in its emitter-collector circuit, means connecting the other transistor to the one transistor to cause conduction through the emitter-collector circuit of the other transistor upon a decrease in conduction in the emitter-collector circuit of the one

PMT/B 50-4 (cont'd.)
transistor, means connecting the emitter-collector circuit of the other transistor to one of the circuits of the regulating means to cause energization thereof upon conduction through the emitter-collector circuit of the other transistor; and means connecting the secondary winding in the emitterbase circuits of the transistors whereby a signal which is of the opposite polarity to the pulsating direct current renders one of the transistors non-conducting in its emitter-collector circuit causing its associated other transistor to be conducting in its emitter-collector circuit to cause energization of its associated regulating circuit.

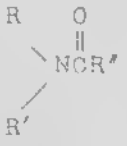
PMT/B 50-5 Transistor Switching Circuit Utilizing Variable Impedance Biasing Means (U.S.P. 3,161,818)
In a voltage regulating circuit for controlling the energization of a generator field in accordance with the output voltage at the terminals of the generator, transistor means having emitter, collector, and base electrodes, said emitter and collector electrodes being serially connected with said generator field across the terminals of said generator, a low impedance, a transistor having its emitter and collector electrodes serially connected with said low impedance between the base electrode of said transistor means and the junction between said generator field and said generator terminal, means for rendering said transistor conductive even in response to the output voltage developed entirely due to residual magnetism in said generator field, inversion means connected across the terminals of said generator operative in response to output voltages above a predetermined level to produce an alternating voltage, means operative in response to said alternating voltage to produce signals every half cycle thereof at a time determined by the magnitude of said output voltage, first control means operative in response to said alternating voltage to render said transistor nonconductive, second control means initially operative in response to said alternating voltage to render said transistor means nonconductive and further operative upon occurrence of said signals to render said transistor means conductive.

PMT/B 48-3 (cont'd.)



wherein R is selected from the group consisting of lower alkyl and phenyl; and Z is selected from the group consisting of hydrogen, phenyalkyl and phenoxyalkyl; and physiologically acceptable salts thereof.

PMT/B 48-4 Solvent System for Formulating Carbamates (U.S.P. 3,342,673)
A dilutable concentrate of a carbamate pesticide comprising between about 5 percent and about 40 percent, by weight of said concentrate of a carbamate pesticide dissolved in an amide having the formula:



wherein R and R' are selected from the group consisting of hydrogen and alkyl groups having 1 to 4 carbon atoms and R" is an aliphatic group containing between about 5 and about 17 carbon atoms.

PMT/B 48-5
(I) Vitamin-Cation Exchange Resin Therapy and Method of Eliminating Drug Odor (U.S.P. 3,342,685)
1. A method of changing the odor of a drug which is normally odorous per se and rendering it more suitable for oral use, which comprises the step of adsorbing said drug upon cation exchange resin.
7. A method of thiamine therapy which comprises administering a thiamine product while said product is adsorbed upon cross-linked sulfonated polystyrene cation exchange resin.

(II) Dermatological Composition Containing 21-Desoxy-9-Alpha-Fluoro-6-Methyl Prednisolone (U.S.P. 3,342,676,)
A steroid composition for dermatological use which comprises 0.01-0.25 part by weight of 21-desoxy-9α-fluoro-6-methylprednisolone, 75 to 99.99 parts by weight of a solvent selected from the group consisting of diethyleneglycol monoethylether, and polypropyleneglycol 400, and zero to 25 parts by weight of a fatty substance selected from the group consisting of wool fat, wool alcohol, and almond oil.